

THE SWAN AND HER CREW



G. CHRISTOPHER DAVIES

Sir Walter St. John's School,
HIGH STREET, BATTERSEA.

This Book was presented to

Henry William Whitehouse

as a Reward for

Proficiency in Divinity

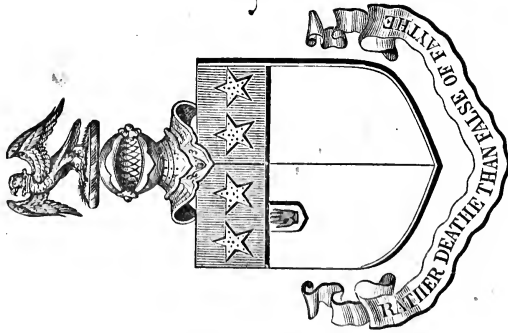
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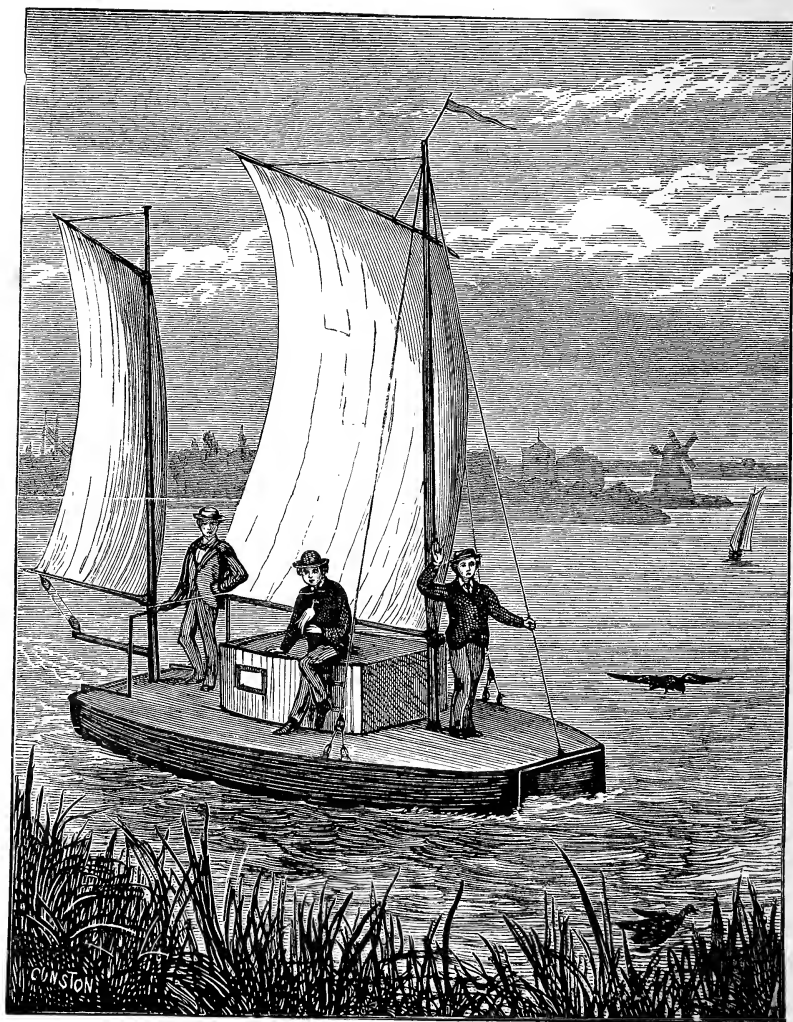
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THE BOYS HAWKING ON THE BROAD.



H E



W A N

AND HER CREW,

OR THE ADVENTURES OF

THREE YOUNG NATURALISTS AND SPORTSMEN

ON THE BROADS AND RIVERS OF NORFOLK.

BY

G. CHRISTOPHER DAVIES,

AUTHOR OF "MOUNTAIN, MEADOW, AND MERE;" "RAMBLES AND ADVENTURES OF
OUR SCHOOL FIELD CLUB;" "ANGLING IDYLLS;" ETC., ETC.

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PREFACE.

A PREFACE is like the bow of an actor when he comes on the stage, or like the hand-shaking of two friends when they meet—the prelude to the entertainment, or the friendly conversation. I suppose, therefore, I must follow the fashion, and say, “How d’ye do?” in this way. I hope the answer will be, “Quite well, thank you, and much the better for seeing you.”

In a book of similar character to this one, which I published a short time ago, I offered to reply to any questions which any of my young readers, who wished for further information upon any of the subjects mentioned in that book, might put to me, by means of letters addressed to me, to the care of the publishers. I then had the pleasure of answering many such letters, and I now repeat the offer to the readers of this book.

I am indebted to my friend Mr. William Whitwell, of Oxford, who is, like myself, a lover of boys, for the chapter on the “LIFE OF A FERN.”

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The Swan and her Crew.

CHAPTER I.

Greeting.—The Broad District.—Hickling Broad.—Felling a Tree.—
Dodging the Swallows.—Shooting the Crossbills.—The Boat-house.

WITH the same feeling of pleasure which one experiences when one writes to an old friend, I commence to write this new book, which I hope will be read by many a boy friend.

It is very pleasant to an author to feel that he has a large circle of acquaintances whom he has never seen, and who know him only through his books. It should be his aim and endeavour to extend that circle of friends, and to increase the good feeling which they bear towards him. Therefore, my dear boys, I hope that after reading this book which I now submit to your approval, you will conceive as affectionate a regard for me as I have for you.

This is a story of sport and adventure, natural history and science, and the movers in it are three boys just like yourselves; and that you may understand the better what they did, I shall first describe the scene of their exploits. It is the eastern part of Norfolk, and no better place could be found as a field for the doings of three enterprising young naturalists and sportsmen. It is known as the "Broad District," and it consists almost entirely of lake, river, and marsh. If we take Yarmouth on the sea-coast as the starting-point, and look inland, we shall see first of all a large tidal lake known as Breydon Water. From this radiate three rivers going north-

west, west, and south-west. The chief of them is the Yare, which winds for thirty miles inward to the old city of Norwich. On our right is the river Bure, or North River, which after a very long and winding course leaves the marsh, and enters a richly-wooded country. To the south is the Waveney, a clear and beautiful stream, which flows past Beccles and Bungay, two towns in Suffolk. All these rivers are slow of current, wide and navigable not only for yachts, but for vessels of large burden, such as wherries, billy-boys, and small steamers. The banks of the rivers are fringed with tall reeds, and they flow through miles of level marsh, where, as far as the eye can reach, there is nothing to be seen but the white sails of the yachts and the dark sails of the wherries, and occasional windmills which are used for pumping the water out of the drains into the rivers. In order to deepen the channel of the river for the purposes of navigation, the embankments have been raised so high that the surface of the water is much above the level of the drains which carry the water off the surrounding marshes, and so the water has to be pumped into the river out of the drains by means of pumps set in action by windmills.

Here and there amid the wide extent of marsh are large lakes or lagoons, which are locally termed "broads." These are very numerous and many of them very large. Most of them are connected with one or other of the rivers. Those on the Yare, are Surlingham and Rockland Broads; on the Bure, or connected with it by long dykes, are Filby and Ormesby Broads, Walsham, Ranworth, Hoveton, Wroxham, Barton, Martham and Hickling Broads, and Heigham Sounds. All these broads are full of fish, large pike and perch, and shoals of enormous bream. They are all very shallow, and are surrounded by dense aquatic vegetation, reeds, rushes, flags and bulrushes, and these are the haunts of many rare birds, and swarm with wild-fowl.

The great characteristic of this part of the county is its utter loneliness and wildness, both qualities which are of especial interest to the sportsman and naturalist. As it is also the most eastern county of England, it is the first to receive many of the rarer migrants on their passage to our shores, and more rare birds are caught there each year than in any other part of our "tight little island."

It is on the shores of Hickling Broad, and on a bright

December day, the first of the Christmas holidays, that our story opens. A tall large-limbed boy, about sixteen years of age, yellow-haired, and blue-eyed, stands with his hands in his pockets, looking over the waste of waters on which the wavelets are dancing before a fresh breeze. His name is Frank Merivale, and he appears deep in thought.

The broad waters he is gazing over are lonely and deserted save for occasional flights of wild-fowl, a marshman slowly pulling his boat across, and a wherry (as a Norfolk sailing barge is called) beating to windward along the broad, making very slow tacks to and fro, the reason of which would not be apparent to one who did not know the broad. Why does she not take long stretches which would take her more swiftly on her course? The reason is this, the broad is not more than three feet deep all over, save for a narrow channel in the middle, which is marked out by posts at long intervals, and if the wherry forsook this channel she would run aground.

The Norfolk wherries are of very peculiar build and graceful appearance. They are long, low, and shallow, rather flat-bottomed, but fine and sharp in the stem and stern, which gives them a good hold of the water. They have one mast, stepped well forward and weighted at the foot so that it can be lowered to pass under bridges, and be easily raised again. This mast supports one immense sail, tanned black or red-brown. They sail wonderfully fast, even rivalling the yachts in their speed, and they can go very close to the wind. They are generally worked by two men, who live and sleep in the little cabin astern.

We left Frank Merivale very much absorbed in thought. All at once a happy thought seemed to strike him, for he started from his reverie, and began to execute a step something between a walk and a war-dance. A clump of rushes put an untimely end to this by tripping him up, and causing him to measure his length upon the ground. With philosophical composure he picked himself up, and walked off, whistling merrily, towards a fir copse which stood upon the crest of a rising, lying above. We should say that while the flat marsh stretches between Hickling Broad and the sea, to the westward and inland the country is diversified with woods, and slight elevations forming a very pretty sylvan district. Reaching the fir-wood Frank entered it, and after looking about for a little

time, he fixed upon a tall slender young larch-tree. He walked round and round it, and examined it critically; finally lying down on his back at its foot, and, with his eye close to its stem, glanced up it to see if it were perfectly straight. Satisfied on this point, he took out a large clasp-knife, and marked the trunk with a huge cross. Then he crossed the hedge and took his way through a large park, until he came to a paddock and pleasant house nestling among some large lime-trees, and surrounded by croquet lawns and well-kept gardens. It was an old house, built with many wings and projections and in many styles of architecture, the most prominent of which was a heavily-timbered Elizabethan style. Around the two principal sides of the house ran a wooden veranda, which in summer was luxuriantly hung with roses.

This was Frank Merivale's home, and vaulting over the gate which separated the paddock from the lawn, he went into the house. Coming down the broad staircase into the hall, he met his two sisters; the eldest, a girl of thirteen, was like her brother, blue-eyed and yellow-haired, with a face full of fun and mischief. Her name was Mary. The younger sister bore the same strong family likeness and was barely eleven.

"Well, merry Mary Merivale," said Frank, "is the pater in?"

"Yes, Frank, he is in the library."

"That's all right; and where are you going?"

"We are going to dig pupæ for you," answered Mary.

"Then you are a good little woman," replied Frank, catching her round the waist, and giving her a kiss.

"Have you got a mat to kneel upon, so as not to catch cold?"

"Yes, we have got a mat and a trowel, in this basket, and we mean to get you a lot of moths. Don't we, Florrie?"

"Yes, ever so many."

Frank went along the passage, and entered the library. Mr. Merivale was seated at the table writing. He was a pale and studious-looking man, with a very kind and genial expression of face. He owned a small estate on the shores of the Broad, and was a deep thinker and scholarly writer, writing books which were intended chiefly for college libraries. He looked up as his son entered, and said,—

"Well, Frank, what is it?"

"Please father, my birthday is next week."

"I had not forgotten it, my boy."

"Well, sir, I suppose you are going to give me a present of some sort as usual, and I thought, if you don't mind, that I should like to choose my present this time for myself."

"If you choose wisely, you shall have what you wish, Frank."

"Well, sir, all that I want is that you should let me have one of the straight young larches by the Broad. I want to cut it down at once that it may season by the spring."

"It is rather a strange birthday present, Frank, but you may have it, in addition to the one your mother and I were about to get you, which was Morris's *British Birds*."

"Oh, father, I am so glad. That is just the book I have been wanting."

Mr. Merivale did not ask his son what the larch-tree was for. He thought that if Frank wished him to know he would have told him at once. He had a most perfect trust in his children, and he delighted to let them see that he had this trust in them. Hence it was their pride to deserve the confidence placed in them, and a happier family was not to be found in all Norfolk. Mr. Merivale supposed his son had good reasons for not making him a confidant in the matter of the larch-tree, so forbore to ask him.

Frank quickly made his way to the outbuildings, where he obtained a couple of axes and a long rope. Laden with these he set off along a thickly-hedged lane until he came to a cottage, set far back in an old-fashioned garden. Here lived Jimmy Brett, his great friend, a boy about the same age as himself, who lived with his grandmother, Mrs. Brett, in this quiet little cottage. As Frank went up the garden walk he saw Jimmy perched on a ladder, engaged in painting a long board, a foot wide, which he had fixed up the whole length of the front of the cottage, just below the bed-room window.

"What on earth is that for, Jimmy?" cried Frank, in astonishment.

Jimmy turned round, revealing himself as a slight, pale-faced lad, with an eager and intelligent countenance, and replied—

"Well, you see, the swallows build in such great numbers in these wide old-fashioned eaves that they are rather a nuisance, and grandmother does not like the mess they make

of the door-steps and windows below, so I thought if I put a board all the way along beneath their nests it would do away with the nuisance."

"That is a clever idea, Jimmy; but do you not think that the swallows will build *below* the board next year. They will think you put it there just on purpose for them."

"I never thought of that, Frank," replied Jimmy, looking rather blank; "but now you mention it I think it is likely enough they will;" and by way of parenthesis I may say that next spring the swallows and house-martins did build under the new board in great numbers, and so frustrated Jimmy's plan altogether.

"What are you going to do with those axes and that rope, Frank?"

"Come and see; but first finish your painting, while I go in and see the grandmother."

As the two boys walked off to the fir-copse, Frank told his friend that he meant to cut down the tree, but he would not tell him what it was that he wanted it for, and Jimmy's curiosity was provoked to a great degree.

When they reached the wood they proceeded to the tree which Frank had marked, and Jimmy was sent up to fasten the rope to the top of it. Then while Frank took off his coat and applied the axe vigorously to the bottom of the tree, making the chips fly in all directions, Jimmy took the other end of the rope over the fence, and kept a steady pull upon it. At last the tree began to creak and groan, and then fell over with a crash. Jimmy then took the other axe, and the two began to lop off the branches. This was a long job, and when it was finished they were very warm and tired, and sat down to rest for a while on the fallen tree.

A clicking and cracking sound in the wood about them now became audible to their quick ears. It might have been heard before had it not been drowned by the noise of the axes. They looked up, and to their great delight they saw a small flock of birds larger than a green linnet, and with plumage of red, brown, and yellow. They were fitting about the fir-trees, cutting off the fir-cones with their bills, and then holding them on the branches with their claws, and cracking them, and picking out the seeds, producing at the same time the noise which had attracted the attention of the boys.

"What are they?" exclaimed Jimmy; "their beaks are hooked, and cross each other. I never saw birds like them before."

"They are crossbills, as sure as we are here!" said Frank, excitedly. "Run to the boat-house as quick as you can, while I watch them, and bring the gun."

Brett sped off like a deer, while Frank followed the movements of the strange birds with interest.

Jimmy returned with the gun, and quite out of breath.

"Now," said Frank, "from the difference in colour there are evidently males and females here, and we must get one of each; and we must do it without disturbing the others, as if we don't frighten them they may stay here and breed."

They watched for some time before they could get the desired chance, and then two birds flew, toying with each other, to some distance from the rest. They were evidently male and female. Frank put the gun to his shoulder, a report rang through the wood, and both the crossbills, for such they were, fell dead to the ground.

Frank might have shot many more, but he was a thorough naturalist, and, as such, he disliked the idea of indiscriminate and useless slaughter. He had procured specimens sufficient, and he humanely let the others go.

"Now, Jimmy, we have got a prize. Crossbills are not seen every day. Let us go to the boat-house and skin them, and read something about them in our books."

The boat-house, which belonged to Mr. Merivale, stood at the edge of a little bay of the Broad. It was a large, substantial structure, projecting out into the water, and having a large room above, approached by a staircase. This had been appropriated by Frank as his "den," and here it was that he and his friend transacted all their private business, held their natural history meetings, skinned and stuffed birds, and kept their collection of birds' eggs and butterflies.

CHAPTER II.

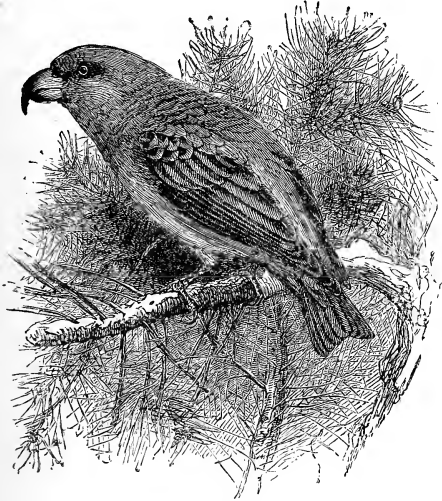
Stuffing the Crossbills.—The proposed Yacht. —An impaled Woodcock.

FRANK led the way up stairs, and unlocking the door they entered the room, and piling up some brushwood in the grate they lit it, and soon had a roaring fire. The room now presented a very cheerful appearance. A large window at one end looked out over the glittering Broad. The room itself was plainly furnished with a few deal chairs and a table, and at one side of it was an old-fashioned bureau, in the drawers of which the boys' natural history collections were stored. Around the room were several shelves, on which were some very creditably stuffed birds, flower-pots filled with mould and covered with gauze bent over cane arches, the use of which will presently appear, and a good number of books on natural history, chiefly of a cheap and popular kind.

Frank got out a box containing knife-blades of various sizes fastened into handles of wood, two pairs of scissors, pliers, and other tools useful or necessary for skinning or stuffing birds; while Jimmy Brett took down a book on birds, and turned to the account of the crossbill; and as Frank was busy at one end of the table skinning the birds, Jimmy at the other end kept up a running commentary on his book for the benefit of his friend, in the following manner:—

“There is a lot about crossbills here, Frank. They are rare, but they have been found at different times and in different months of the year in many parts of the kingdom. They vary greatly in size as well as in colour, according to age, sex, and the time of the year. They are yellow, red, green, or brown at different times, so if it were not for their cross bills it would be rather hard to distinguish them. There are two pictures of them here; one has a rose-coloured back and red-brown wings, and the other has a green back and brown wings. The beaks curve and cross each other, and appear to be particularly suited for breaking open the cones of fir-trees and picking out the seeds, and they will cut open apples and other

fruit to get at the pips. They come generally in the winter, but often stay until the spring, and then they may breed here, although it is very seldom that their nests are found. They breed in Norway and Sweden, and nest very early in the year, and their nest seems to be like a missel thrush's, and is placed in fir-trees. Their eggs are white with just a touch of blue or green, and spotted with brown spots."



CROSSBILL.

"There, that is all that seems to be worth noticing, but we have got a prize worth having. I am afraid they will not stop and breed. There are not enough pine woods about, and they appear to be fond of going from place to place, so that it is not likely they will be here in the spring."

While he talked, Frank quickly and skilfully skinned and cleaned the birds, and then he painted the inside of the skins with a solution of corrosive sublimate dissolved in spirits of wine, which is a most excellent preservative and much more cleanly to handle than arsenical soap. Then he loosely stuffed them with cotton-wool, smoothed the feathers, and placed them on a shelf to dry.

"Now, Frank," said Jimmy plaintively, "what *are* you going

to do with that young larch-tree? I have been very patient all this time, so you may as well tell me now."

"Well, Jimmy, I have thought of a grand idea. You are the inventive genius of us two, and I usually carry things out; but I have invented something now which we must both help to carry out. What do you think of having a yacht, Jimmy—a large yacht, so that we could sail all over the Broad, and down the rivers, and all over the country, and fish and birdnest, and naturalize, and shoot wildfowl to our hearts' content? What do you think of that, my boy?"

"It would be an awfully jolly thing, no doubt; but as far as Hickling Broad goes, it is too shallow for any yacht. Why, except in the Channel, it is not more than four feet deep in any part, large as it is; and parts of it are only two feet deep, so that if we had a yacht we should stick fast directly. Besides, how are we to get a yacht?"

"Make one."

"How? It will be impossible."

"We could not make a yacht of the usual shape, and if we could, it would not suit our purposes. What I propose is that we should build a double yacht. Just listen while I explain, and don't interrupt. We will make two long pontoons, pointed at both ends, and connect the two by cross-pieces, on which we can lay a deck and build a small, low cabin. Such a boat would not draw more than a foot of water, and to make her sail to windward we should have a drop keel or centre board, which we could let down or draw up according to the depth of the water. Then I think a lug sail and mizen would suit her best. We will build her ourselves. And inch deal is cheap enough, so it cannot cost so much. I have saved my pocket-money to buy a lot of books, but I can do without them for a time"—

"I have a couple of sovereigns," eagerly interrupted Jimmy.

"That is right; then we can do it swimmingly. We will build her in old Bell's yard, and he will lend us what tools we have not got."

Jimmy warmly welcomed the idea, and, getting out some paper and pencils, they began to draw plans and estimates of cost with great enthusiasm.

"And now," said Frank, "we will go and see Bell and ask him what he thinks of it."

Bell was a very eccentric old man, who lived on the shores of a small and winding creek, which ran up from the Broad. By trade he was a tailor, but he united to this the very different occupation of a boat-builder, and filled up his spare time with fishing and shooting wildfowl. He was a close observer of the habits of beasts, birds, and fishes, and was a great favourite with the boys, whose visits he liked and encouraged.

Stepping into the boat that lay moored in the boat-house, the two boys rowed across a bend of the Broad and up the creek to his cottage. The old man was at work in his yard, repairing the bottom of a boat, while his old wife might be seen at the window of the house putting the finishing-touches to the Sunday coat of some village beau.

"Good morning, Bell ; it is a fine day."

"Good morning, young master. Yes, it is a fine day, but it will be finer to-morrow. Yon robin sings higher in the poplar this afternoon than he did this morning, and that is a sure sign that finer weather is coming."

"I never knew that before," said Frank.

"No, you have not lived so long in the world as I have," replied Bell ; "but I am glad you have come, for I have a very strange sight to show you. Look here."

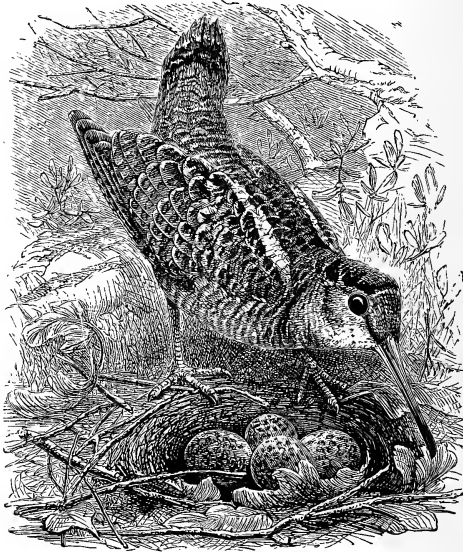
He went into the cottage, and returned, bringing with him a dry and withered branch, one end of which had been torn and slit, probably by the wind, so that it was a sharp and jagged spike. On the end of this was impaled a fine woodcock, dead of course, and with the sharp piece of wood imbedded in its breast.

"Poor thing, how did it get into that fix?" Jimmy exclaimed.

"Well, sir, you see it was in this way. The birds, as you know, are now coming from abroad—I can hear great flocks of them at night sometimes as they fly overhead calling to one another—and last night you know was pitch dark, so that this woodcock, coming over at a great speed, flew against this sharp branch in the dark and spiked itself. When I got up this morning I saw it in that oak-tree, and I sent my boy up to cut off the branch, and knowing you would like to have it, I kept it, just as it was."

"We are very much obliged to you, Bell, and we will mount it and stuff it, just as it is. It will be an interesting thing to add to our museum, won't it, Jimmy?"

“I have often heard of birds flying against the telegraph wires and being killed in the dark, and of their dashing against windows, either attracted by the light, or not seeing the glass, but I have not heard of anything so curious as this. One cannot help feeling sorry for the poor bird. After a long and tiring journey, and expecting to find all its troubles over, to meet with a sad end like this !”



WOODCOCK.

The boys then unfolded their plan to Bell. Anything out of the common was sure to interest him, and hence, though he was not so sanguine of success as the boys were, yet he thought it might be done, and offered to help them as much as he could, and to let them use his yard.

“There is nothing like making a beginning,” said Frank, who was quick and impetuous in action, and he took off his coat and set to work vigorously to clear a space close by the water’s edge, where the keel of a yacht might be laid, while Jimmy went through their calculations of cost with Bell.

CHAPTER III.

A Momentous Decision.

WHEN Frank went home one of the servants told him that his father particularly wished to see him in the library as soon as he came in. He went into the library, and found his father and mother both there and looking rather serious.

"Sit down, Frank," said his father. "We have something to say to you about which we wish you to think carefully before you decide. Sir Richard Carleton has been here. He is not only a neighbour but a friend of mine, although as I do not go out much we seldom meet each other. He is a widower with one son, a boy about your age. Do you know him?"

"Very slightly, sir."

"Well, this son of his, Dick Carleton, is very delicate; he has grown very tall and beyond his strength, and the doctor says he must not be sent to a public school. Now at home he has no boy companions, and he is moping himself to death. Sir Richard says he takes no interest in anything; he won't ride or work, and if he goes on like this it will end in a serious illness. What his father wants to do is to arouse in him some interest in his life, and to awake him out of the deadly apathy he is in at present. Sir Richard knows your healthy outdoor mode of life, and your fondness for Natural History and sport, and he thinks you might, if you chose, be the means of making his boy take some interest in the same sort of thing, and if you did so you would in all probability save his son's life. Now what he proposes is this: That you should leave the Grammar School at Norwich, and that his son and you should be placed under the tuition of our Rector until it is time to go to college. Your education would be as well attended to as at Norwich, and your mother and I could have no objection to the arrangement, but we wish you to decide for yourself."

Frank's decision was made at once. The life at the Grammar School was very jolly, with its cricket and football and the

rowing matches on the river, but if this new arrangement were carried out there would be far better opportunities of building and sailing the projected yacht, and of sporting and naturalizing on the broads and rivers, so he at once answered—

“I shall be very willing to try it, sir; but Jimmy Brett must be included in the arrangement. I could not desert him, and he would be miserable without me at school. It would never do to separate us now, father.”

“Well, but do you think his grandmother can afford it? It will be more expensive than being at the Grammar School.”

“Then I tell you what, father and mother: the Rector must only charge Jimmy the same as the Grammar School, and you must make up the difference to him, and I will do with less pocket-money.”

“You shall not make that sacrifice, darling,” said Mrs. Merivale; “we will put that all right, and I will go and see Mrs. Brett in the morning.”

And so the matter was finally arranged, and that the boys might become well acquainted with each other, Dick Carleton was invited to stay at Mr. Merivale's. But before he comes we will just go back a few hours and follow merry Mary Merivale, as her brother called her, and her younger sister Florrie, on their search for pupæ.

CHAPTER IV.

Digging for Pupæ.—Dick Carleton.—Metamorphoses of Butterfly.

ABOUT two miles further inland from Mr. Merivale's and in the midst of a fine and well-wooded country, was Sir Richard Carleton's house. Around it was a park with larger timber trees than were to be found in the rest of the countryside. Mary and Florence Merivale had fixed on this spot as the scene of their labours in the cause of science, as represented by the collections of their brother and Jimmy Brett. Leaving

the path, they trespassed boldly in search of suitable trees for their purpose. Frank had told them that the vicinity of houses was the best, because moths, in all probability attracted by the lights, laid their eggs on trees and shrubs near houses. So the two girls went up as near the large house as they thought they might venture without being seen, and commenced their search.

A tall youth strolling languidly down a path through the woods saw two kneeling figures in red cloaks at the foot of a large willow-tree, and their movements aroused his curiosity, and while he stands looking at them let us say what manner of boy Dick Carleton is. He is very tall and thin, but he has a figure that only wants filling out to be handsome. He has a very beautiful face and head, and curly brown hair. His large dark eyes and pale complexion make him look more delicate than he really is, but he is afflicted with a listless melancholy that shows itself in every movement. It was this melancholy which had aroused his father's fears, and it was plain that if it were not checked in time grave results might follow. He stood for some time looking at the two girls, wishing to ask what they were doing, but too shy to do so. At last Mary caught sight of him, and rising, she said—

“I hope we are not trespassing?”

“You are trespassing, but it does not matter,” replied Dick, taking off his hat. “But may I ask what you are doing?”

“We are digging for pupæ,” answered Mary.

“And what are pupæ?”

“Don't you know?” asked Mary in surprise.

“No.”

“Why they come into moths. The moth lays its egg, the eggs turn into caterpillars, which feed on leaves and trees, and then turn into these things,” and she then showed him five or six large red cylindrical objects which she had in her basket. “When the spring comes these will turn into moths.”

“How wonderful,” said Dick. “I did not know that before; but if the caterpillars feed on leaves, how is it that you dig those from the ground?”

“The caterpillars of some moths go into the earth before they change into the pupæ state. I do not know why: I suppose they think it safer.”

“Where did you learn all this?” said Dick, his eyes lighting

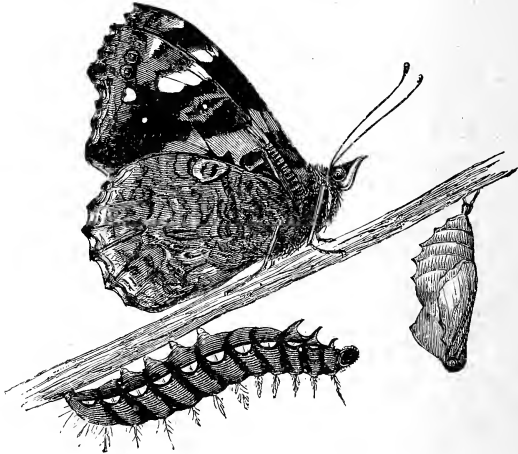
up with a new life and interest at this first glimpse of what was to him a new and strange world.

“From my brother Frank and Jimmy Brett. They are making collections, and we are helping them as much as we can. My brother is Frank Merivale, and I am Mary Merivale.”

“And my name is Carleton; but please tell me more about these things. Will they turn into white butterflies?”

“They won’t turn into butterflies at all, but into moths, great ugly things with thick bodies; only Frank and Jimmy like them.”

“I should like to find some if you will show me how to



METAMORPHOSES OF BUTTERFLY.

dig for them. I suppose if I keep them they will turn into moths some time.”

“Yes; put them into a flower-pot full of mould and keep it rather damp, and put something over so that the moths sha’n’t fly away, and in the spring they will come out; but it is prettiest to see butterflies come out. They split open the chrysalis at the back of its neck and creep out, but their wings are all shrivelled up to nothing, and they climb up the side of the box, and then their wings spread out, and get so large and beautiful! I could find you plenty of the chrysalides

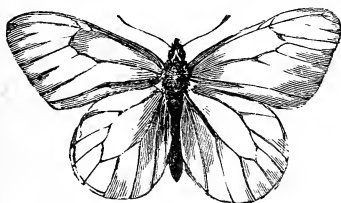


THE PARK IN SUMMER.

of the white butterflies by your greenhouses, but if you want moths, take this trowel and dig around the other side of this tree about three inches from it and three inches deep. They do not breed on all trees ; we have tried five to-day and found nothing, but at this one we have got twelve."

More amused and interested than he had ever been before, Dick knelt down and began to dig. Very soon he found a large chrysalis, and, encouraged by this success, he dug more vigorously, and very soon he had found five, while the girls had increased their spoils to sixteen.

"Now, Miss Merivale, will you come to the greenhouses and show me how to get some butterfly chrysalides? I shall be very glad if you will, and I should like to introduce you to my father, and I will ask him to ask your brother here, then he could tell me more about these things."



WHITE HAWTHORN BUTTERFLY.

Mary hesitated, but Florrie said, "Oh, do go, Mary ;" so she consented, and they walked up through the gardens, and Mary showed Dick where to look for the chrysalides of the common white butterfly, which are to be found through the winter attached by a silken thread to the sheltered sides of walls, and under the coping of greenhouses and buildings near the gardens where the caterpillars have fed on the lettuces and cabbages.

Sir Richard Carleton was in one of the conservatories, and seeing him, Dick cried out—

"Father, these red things will turn into moths, and these greenish-white ones into butterflies."

"Yes, Dick, I know they will."

"But you never told me so before, father."

"Well, my boy, I never thought it would interest you, but I am very glad it does interest you. This is Mary Merivale,

I think. How do you do, my dears? Come into the library all of you, and I will show you some books on butterflies."

They went into the house and had some tea and cake, and turned over the pages of a book on entomology with coloured plates, which had lain dusty and forgotten on the shelves until now, and Mary and her sister pointed out to Dick moths and butterflies which their brother and Jimmy had in their collection.

Sir Richard saw with delight that the right chord had been touched in his son's mind, and he no longer doubted the success of the experiment he had urged Mr. Merivale to try.

The time slipped rapidly away, and when it was high time to go, Mary and Florrie were driven home by Sir Richard's groom, charmed with their visit, and full of praises of Sir Richard and his son.

Dick Carleton was eager to know more of entomology, and set to work at once to read about it with an energy he had never displayed for anything before, and the father wrote off to his booksellers to order a newer and more reliable book upon the science than the one he possessed, to be given to Dick.

CHAPTER V.

Building the Yacht.—The Launch.—Great Crested Grebe's nest.—A Floating Coot's nest.—Golden Crested Wrens.—Their Migration.—The Flight of a Heron.

WHEN Dick Carleton arrived at Mr. Merivale's to commence the visit which was to initiate the friendship of the boys, Frank and Jimmy were at the boat-house; and as soon as Dick had been welcomed by Mr. and Mrs. Merivale, Mary took him off to the boat-house to introduce him to Frank and Jimmy, and see that he was shown their collections. When they opened the door they saw the two boys busy at the table, with sheets of paper and drawing instruments before them. Dick felt and looked rather shy and nervous, but Frank's hearty greeting put him at his ease. Mary proceeded to do the honour

of the place, and walked Dick about from side to side of the room to show him their butterflies and birds' eggs, stuffed birds, and the other natural history curiosities which the boys had collected, while they were followed by Frank and Jimmy, who smiled at her eagerness. They had a very fair collection of eggs, including most of the common kinds, but their collection of butterflies was not so good, as neither Frank nor Jimmy cared so much for entomology as they did for ornithology.

"What are all these plans and drawings for?" said Mary, pointing to the litter on the table.

"Shall we tell her Jimmy?" said Frank.

"Yes, why not? She will know some time, so she may as well know now. Besides, she can help us to make the sails, you know. We sha'n't do the sewing so well as the wood-work."

So the great project of the yacht was explained. Mary danced about the room in glee, and already fancied herself sailing about the broad. Dick said—

"If it can be done, it would be the nicest thing one could think of."

"It shall be done," said Frank decisively, and Dick looked up at him with admiring envy, and replied—

"Then I will help you all I can, and go shares with you in the expense."

"You are a brick," said Frank; "come and look at our plans, and see if you can make any suggestions."

Later on, when Frank and Jimmy were left alone, Frank said—

"He'll do, Jimmy."

Jimmy said, "Yes," but looked mournful.

"What's the matter, Jimmy?"

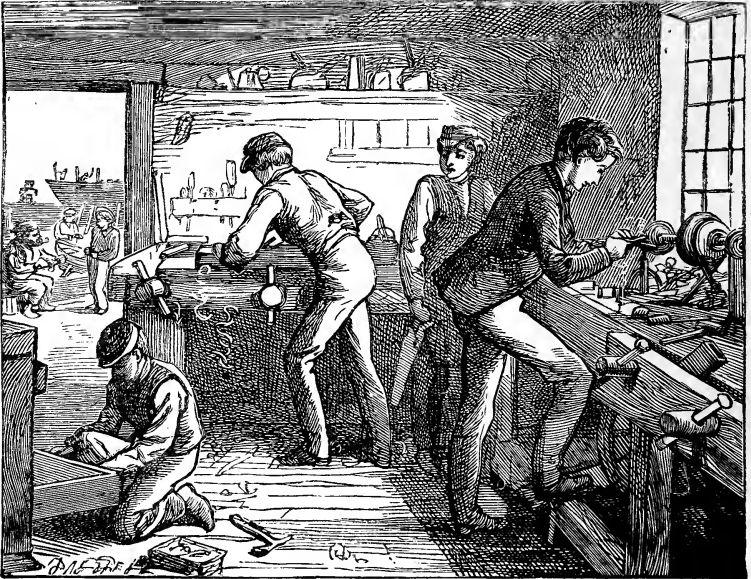
"Two are company, but three are none; and you may like him better than me."

Frank's hand descended heavily on his friend's shoulder, and he shook him roughly.

"Don't be a fool, Jimmy," was all that he said, but in spite of the rude speech and the rough action, Jimmy saw a meaning beyond, and was quite satisfied. His face grew bright again, and from that time forward a warm friendship existed between the three boys, and was never broken or disturbed by any twinge of jealousy.

They lost no time in commencing to build the boat. The

first thing to be done was to make two long pontoons or floats, on which to erect the superstructure of the yacht. This was a comparatively easy matter. They made two long wooden boxes of the following sizes and dimensions. Each box was twenty four feet long, four feet wide in the middle portion and tapering off at each end to a fine point, and two feet six inches deep. It was made of one-inch deal, and strongly supported and fastened together by ribs and cross-pieces of wood in the



BUILDING THE BOAT.

interior. The seams were caulked with tow and a mixture of red and white lead, and then covered or protected by slips of wood nailed along them. These two pontoons were then laid on the ground side by side with a space of three feet six inches between their centres. They were then joined together by strong pieces of wood fastened the whole way across, every two feet. On the top of these again, a flooring of planks

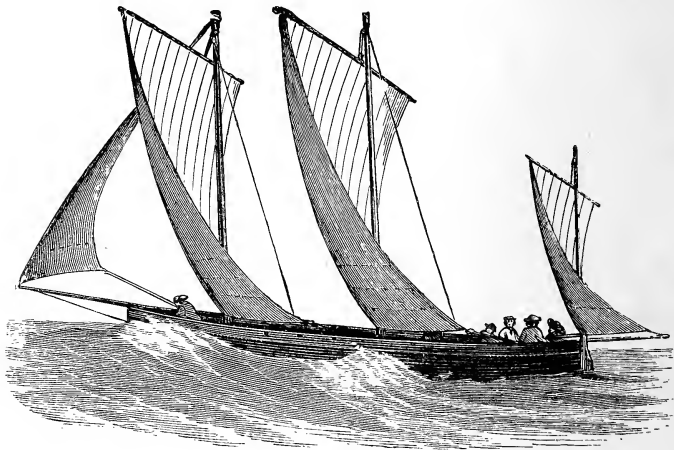
was laid, and neatly finished off round the edges with a bulwark of rope stretched on iron uprights. On this was erected a cabin three feet six inches in height, nine feet long and seven feet wide. This was fitted with a door at the aft end, and a row of little windows along each side. Inside were two low broad seats, which were also intended to serve as beds when occasion should require.

Each pontoon was fitted with a rudder and a helm, and these were connected by a cross-piece of wood, so that both rudders were worked at once. On this cross-piece were two iron loops, that the steersman, holding on by them, might have greater power over the helm. Each pontoon had a strong keel about two inches deep to protect its bottom from injury. Such a keel was not sufficient to enable the boat to sail to windward, so two drop-keels or centre-boards were added, each about seven feet long and two feet six inches deep. These were fixed in a line along the centre two-thirds of the boat, and worked on strong pivots at their foremost corners, so that by means of chains attached to their aft corners and passing through holes in the deck they could be let down to any required depth, or hauled up in the space between the pontoons.

These were intended to give the yacht a greater hold on the water when beating to windward. The main-mast was stepped close to the bows. Its lower part was weighted with lead and iron, and was so arranged that if it were requisite to pass under low bridges, the mast could be lowered and raised with great facility, working on a fulcrum three feet six inches from the deck. There was no bowsprit, but the fore-stay was made fast to the cross-piece connecting the bows. The mizen-mast was attached to a cross-piece at the stern, and the mizen-sail was worked by a sheet rove through a block at the end of a fixed boom. The main-sail was a lug-sail with a large boom, and did not require to be dipped every time a tack was made.

The above is a description of the yacht when completed, but it must not be supposed that it was made straight off with no labour. On the contrary, it took an immensity of time and labour before it was completed. The three boys worked at it manfully, Frank taking the lead and doing the major portion of the work. Indeed, they would have given it up many times had it not been for his pluck and determination. Unforeseen

difficulties fast presented themselves, and cost them no little thought to overcome. When they had got the two pontoons and the flooring done, they fell short of cash, and for two or three days they went about very disconsolately, until Dick informed them that his father's gardener was about to demolish a summer-house in the garden, and that they might have the wood. This enabled them to make the cabin, and by dint of keeping their eyes open, and picking up every scrap of wood or iron, and every nail or screw which they came across, they got along pretty well until Frank's quarter-day came, and he



A YARMOUTH YAWL.

received his allowance of pocket-money. Mr. Merivale, who of course soon found out what they were after, laughingly said that they went about with such greedy eyes, and looked so suspiciously at everything, that he was afraid they might take a fancy to some part of him, as being useful for some part of their boat.

At last they had everything ready but the sails, and then they had an unexpected stroke of good luck. Dick discovered in an old lumber loft, a complete set of sails belonging to a yawl-rigged yacht which was formerly the property of his grand-

father. These his father willingly gave to him. Although so old they were strong, and they were speedily converted into sails for the yacht. Then the yacht was painted white, and a small flat-bottomed punt with pointed bows was made to accompany her, and all was ready for launching.

By this time the land was green with spring, and the boys had commenced their studies with Mr. Meredith the Rector,—a clever, sensible Welshman, just the man to attract and manage three such boys as ours.

Saturday, being a holiday, was fixed for the launching, and the boys were at Bell's yard by six o'clock in the morning, getting everything in readiness for the great event, and excited with the thought of a long day's sail in a yacht of their own making.

It was a warm, bright morning. The hedges were shining with a most brilliant green, and clothed in places with the creamy white of the hawthorn blossoms. The broad lay still and placid in the sunlight, and the pairing water-birds swam in and out of its reed-fringed margin, and from one to another of its dense 'ronds,' or islands of reeds.

"There is not a breath of wind," said Frank, wetting his finger, and holding it up, to feel if possible by the increased coldness on one side or another, from which quarter the wind was blowing.

"I think there's a slight air from the south," he said.

"Yes," replied Bell, "it will blow from the south or west to-day, if it blows at all, and I think from the look of those little fleecy clouds, that there will be a breeze before long."

"Well, I am sure the ancient mariner never longed for a breeze as much as we do now to try our beautiful boat with," said Frank; "but by the way, what shall we call her? We have never thought of a name for her." Dick replied:

"Call her the *Swan*, because like the *Swan* on 'sweet St. Mary's Lake,' she will float *double*."

"Bravo! that is not bad. We will call her the *Swan* then; but come, let us launch her."

They set to work with a will, and, aided by Bell, they quickly had her on the water. Jumping on board, they felt the delight of being on board their own handiwork. They pushed the yacht along the narrow channel, which was barely wide enough for it, until they came to its outlet into the

broad, and then they found their progress barred. A little promontory of rushes ran out across the dyke, and on the end of this promontory was a coot's nest containing eight eggs. It was necessary to cut away the promontory before the boat could pass into the open broad. They were loth to destroy the nest, so they carefully moved it from its position ; and as it was very large and substantial, they allowed it to float, thinking the old bird would come and fix it herself. Then with beating hearts they hoisted their sails. Frank went to the helm, Jimmy took the main-sail sheet, and Dick the mizen sheet, while Bell sat on the cabin and whistled for a wind.

"I am sure the leaves of the trees are rustling a little bit," said Dick.

"And I think I see a ripple on the water," said Jimmy.

Frank looked back and saw that they were already fifty yards from the shore, and that they were rapidly increasing the distance.

"Why, look ! she sails fast, without any wind at all," he said ; but then they became sensible that there was a slight zephyr from the south, which increased as they got out more into the open water. A ripple arose on the water, and the yacht sailed faster. A cheer broke from the boys as they saw their efforts were crowned with success. The breeze increased, and they sped along more quickly, passing over acres of shallow water that sparkled as clear as glass over the bright yellow gravel. Immense shoals of bream and perch, and many large pike, darted away from them as they sailed on, and the *Swan* slipped as softly through the water as they could desire. They went the whole length of the broad, and then Frank cried out—

"Stand by, we are going about ; haul in her sheet ;" and putting the helm over, the yacht swung round like a top, and went across on the port tack up the broad.

They put about again across to the reed bed, and after one more tack they came within hail of the boat house, where they could see Mary and Florrie waiting for them, and waving their handkerchiefs. Frank took his "line" steadily, and ran her up in the wind's eye within ten yards of the boat-house ; and Dick took the punt ashore for the two girls, who were loud in their expressions of delight and amazement. With this addition to their party they cruised about the broad for some hours, learning how to handle their craft, and gaining confidence in

her. Towards noon it came on to blow very hard, and they landed Mary and Florrie, and set to work to enjoy themselves the more thoroughly as the breeze grew stronger. The boat behaved admirably. She was as steady as a rock, heeling over but very slightly even when the breeze blew strong on her beam. She came about well, and if she hung fire or was in danger of missing stays they had only to haul on the mizen-sheet, and her head went round "in a jiffy." She drew little more than a foot of water, so could, when her keels were drawn up, pass over the shallowest part of the broad in safety.

"I say, this is fine," said Jimmy, rubbing his hands. Frank said nothing, but his kindling eye and satisfied look showed how thoroughly he enjoyed it all.

While making a long tack across the broad, they ran across a straggling bed of rushes at a shallow portion. They offered but little resistance to their passage, but as they charged through them, Frank cried out—

"I say, we passed over a great crested grebe's nest. I saw the eggs roll out into the water;" and he ran the boat into the wind and let her drift back stern foremost to the spot where the nest had been.

"It was only a lump of rotting weed, all broken and dirty," said Dick.

"That's what all grebe's nests look like," answered Frank; "they cover them with reeds when they leave them, so that no one can see the eggs, and few would think there were any there. Here's the place, drive the boat-hook in and hold the boat steady while I get up the eggs. There were five, but two are broken. What a pity! We don't want any for our collection, and the birds look so pretty on the broad, that it is a shame to disturb them, but we must take them now I suppose. Let's go back and see how the coot's nest is getting on."

They sailed back some way, and then to their great surprise, they saw the coot's nest floating across the broad, and the old bird swimming round it, and evidently very much puzzled to know what to do.

"Let us tack near her and watch," said Jimmy. So they sailed round at a distance and watched the poor bird, which followed its boat-like nest as it drifted before the wind. At length the boys were pleased to see the bird make an effort to get on the nest, and so strongly built was it that it bore her

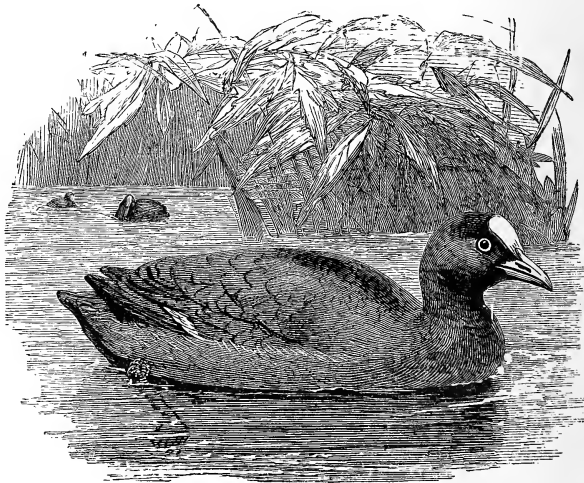
weight well. There she sat, and sailed before the wind at a fair pace.

“Did you ever see the like of that before?”

“No,” answered Bell, “but I warrant you that the eggs must have been hard set, and near to being hatched, or she would never have done that.”

“She deserves to hatch them, at any rate. Had we better fix the nest or leave it alone?”

“Better leave it alone; I think she will stick to it if it does not sink below her.”



THE COMMON COOT.

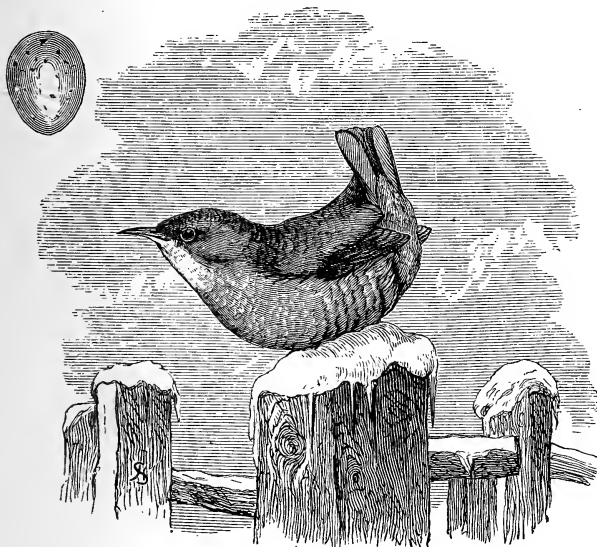
On Monday evening the boys sailed about the broad in search of the floating coot's nest, and found it among the reeds at the north end of the broad, and from the broken egg-shells in it they had no doubt but that the coot had hatched her young ones in safety, as she deserved to do.

After landing Bell they ran the yacht into a 'rond' of reeds, and proceeded to eat their dinner, which they had brought with them, and very happy and comfortable they were. The sun shone brightly, the warm wind rustled through the reeds and flags, the sky and the water were blue, their boat was a

success, and they sat and talked of cruises, and planned expeditions, and were as merry and jolly as any boys need desire to be.

While they were talking, half-a-dozen tiny little gold-crested wrens alighted on the cordage of the mast. They seemed very tame and tired, and descended to the deck to eat some crumbs which were thrown to them.

“What pretty little things they are, with their fiery yellow heads,” said Frank. “To think a tiny bird like that could



COMMON WREN AND EGG.

make a long migration! These birds have only just arrived, that's clear.”

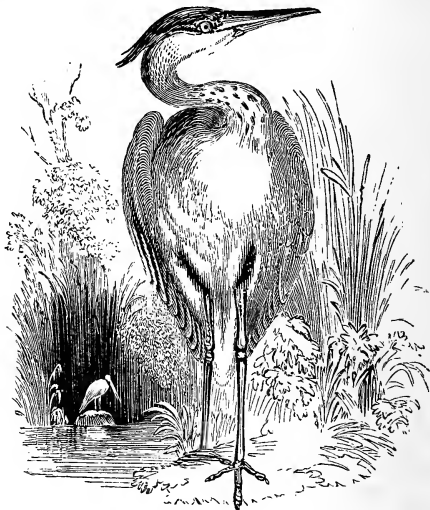
“Do gold crests migrate?” asked Jimmy.

“Yes, they go south for the winter, and come back again in the spring. I don't know how far they go, but they have been taken some distance from land. More probably, however, these have been blown from the coast, for I don't think they cross the sea as a rule.”

As they returned homeward, the boys in running round a point of reeds, came upon a heron, which scuttled away in great haste, and in a very undignified manner. It seemed at first as if they should catch him, as they followed him so closely, but as he got fairly away, he rose in the air and distanced them.

“How slowly he flaps his wings,” said Dick.

“How many times a minute do you think he flaps them?” asked Jimmy.



HERON.

“Just about forty, at the outside,” replied Dick.

“Well, do you count, while I time you,” and Jimmy took out his watch and marked the time, while Dick counted one, two, three, &c.

When he had counted 120 Jimmy said—

“Stop, the minute is up. Aren't you astonished?”

“I am, and no mistake. How deceptive his flight is, and just fancy at what a pace must the wings of the smaller birds go!”

They brought the yacht to anchor in front of the boat-house, and went home to relate the adventures of their voyage.

CHAPTER VI.

Mr. Meredith.—“Whatsoever thy hand findeth to do, do it with thy might.”
—A Botanical Lecture.—The Goat Moth.—Blowing up a Tree.—An astonished Cow.—Caterpillars in the Wood.

ON the morrow, after morning service, the three boys (Dick having been invited to spend the day with Frank) were walking from church and talking upon the sermon which Mr. Meredith had just preached to them.

It was a beautiful morning—one of those days on which it is a treat to live. The sun shone from a sky which was brilliant in its blue and white, the waters of the lake sparkled diamond-like under the stirring influence of a warm westerly wind. The scent of the honeysuckle and the roses in the cottage gardens filled the air with pleasant incense, and from every tall tree-top a thrush or blackbird sang his merriest.

“That wasn’t a bad motto which Meredith took for his text : ‘Whatsoever thy hand findeth to do, do it with thy might,’ ” said Frank.

“I think it is a motto you endeavour to carry out, Frank,” answered Jimmy.

“Well, I think if a fellow does that he can’t be far wrong,” replied Frank ; “but here is the parson himself.”

A tall, broad-shouldered man came quickly up and said to them :

“Well, boys, I hope you are applying my sermon to yourselves.”

“We should be glad to do so if we were quite sure about the application, Mr. Meredith,” replied Frank.

“Ah, you young rascal, you could not have been attending ; but seriously, what I meant was this : You boys, and especially Master Frank, are very prone to take up a thing with all your might when once you begin. Now that is very right and proper. Whatever you do you should do your best to do well ; but what I want you particularly to understand is that before taking up a thing, you should first of all think well and decide

whether it is the right thing to do, and it is not until that question is settled that it becomes right to throw your whole heart into it. Now the immediate application of this is this : You are going head over heels into the study of Natural History, and you are making collections as fast as you can. Now it won't take you long to decide that Natural History is a very right and proper thing for you to take up, and therefore you may study it with all your might, and, I doubt not, to the praise and glory of God ; but be very careful about the collecting part of the business. Don't let your zeal carry you too far. Don't let collecting be your sole aim and object, or you will become very low types of naturalists. Let it be only secondary and subservient to observation. Let your aim be to preserve rather than to destroy. Remember that God gave life to His creatures that they might enjoy it, as well as fulfil their missions and propagate their species. Therefore if you come across a rare bird, do not kill it unnecessarily ; if you can observe its living motions it will interest you more and do you more good than will the possession of its stuffed body when dead."

"I quite understand what you mean, sir," replied Frank ; "and it is only what my father has often told me before. We will try to follow our pursuits in moderation."

"Just so ; then, as you have heard me so patiently, I will trouble you with another application of my sermon. Do what you are doing *well*. Don't let your observation be too cursory. Don't be Jacks of all trades and masters of none. This district is teeming with bird, insect, and animal life. You boys have peculiar opportunities for learning and discovering all that is rare and interesting. You are sharp, young, and active, and nothing can escape you. Now is the time for you to store up facts which will always be valuable. Buy yourselves notebooks ; put down everything in writing which seems to you to be strange and noteworthy, and don't trust to your memories. But above all, take up some one branch of study and stick to it. It is well for you to know a little of everything, but it is better for you to know a great deal of one thing. Therefore I should advise each of you to take up a line that suits him and to pay particular attention to it. Thus you, Frank, may take up Ornithology ; you, Dick, should go in for Entomology ; and Jimmy, why should you not take up Botany ?"

The boys quite concurred in the justice of his observations, but Jimmy said :

“There is nothing I should like better than to know something of Botany, but there seems so much to learn that I am almost afraid to begin.”

“Oh, nonsense,” exclaimed Mr. Meredith ; “let me give you a first lesson in it now. I suppose you know the names of all the most common flowers ; but just look at their beauty. See how this hedge-bank is yellow with primroses, and yonder you see the faint blue of the violets peeping from their bed of dark-green leaves, and here is the white blossom of a strawberry, which I pluck to show you of what a flower consists. First there is the root, through which it draws its nourishment from the earth. Then there is the stem, and on the top of that is this green outer whorl or circle of leaves, which is called the calyx. Within the calyx is the corolla, which is formed of petals, which in this case are of a beautiful white. The corolla is the part in which the colour and beauty of a flower generally resides. Within the corolla are the stamens, and within the stamens are the pistils. The stamens and the pistils are the organs of reproduction, and the yellow dust or pollen which you see on most flowers is the medium by which the seeds are fertilized. Now this flower which I have just plucked is the wood-sorrel. Notice its threefold emerald-green leaf and the delicate white flower with the purple veins. It is pretty, is it not ? See, if I strike it roughly, it shrinks and folds up something like a sensitive plant. It is a capital weather-glass. At the approach of rain both its flowers and leaves close up, and even if a cloud passes over the sun the flowers will close a little ; and, finally, its leaves taste of a pleasant acid. There, you will have had enough of my lecture for the present, but I should like to tell you more about flowers some other time.”

The boys were both pleased and interested with what he had told them, and expressed their thanks accordingly ; and then Mr. Meredith left them and went home to dinner.

“I say, he is a brick of a fellow,” said Jimmy ; “if all parsons were like that man everybody else in the world would have a better time of it.”

They went into the boat-house and sat at the open window looking over the sparkling broad. Frank said :

“I tell you what we must do. We must get Meredith to give

us part of our holiday at the end of May or beginning of June, and we will take a cruise over all the rivers and broads of Norfolk and Suffolk. We could do it nicely in three weeks and scour every inch of the country in that time. What do you say? I will undertake to get my father's consent and Mrs. Brett's. What will Sir Richard say, Dick?"

"If you go, Frank, I am sure he will let me go; he has every confidence in you, and that you will keep us all out of mischief."

"I will try. Then it is agreed that we go."

"Most certainly. Frank will go in for birds'-nesting, Dick will catch butterflies and moths, and I must try to do something in the way of botany."

"And now it is time to go in; but before we go I just want to say that there is an old willow-tree down by the Broad which father thinks is an eyesore. I think that it is a likely tree in which to find the caterpillars of the goat-moth, which you know live on the wood of a willow, and eat long tunnels and galleries in it. What do you say to blowing the tree up with gunpowder?—it is only good for firewood, and perhaps we may find some caterpillars. Shall we get up early in the morning, bore a big hole into the heart of the tree, and fill it with gunpowder, set a train to it, and blow the whole affair up?"

Such a proposal was sure to meet with consent, and at seven o'clock the next morning the boys were down at the tree, boring a large hole into it.

The caterpillar of the great goat-moth feeds upon the wood of timber trees, notably oak, willow, and poplar. He is a smooth, ugly fellow of a red and yellow colour, with black feet and claws. He makes extensive galleries through the heart of a tree, eating and swallowing all that he gnaws away from the wood in his onward passage.

During the summer he eats his way slowly through the tree, making numerous and winding galleries; but during the autumn and winter he takes a siesta, first casing himself in a strong covering made of chips of wood and the silk which he weaves. The next summer he renews his work, and so he lives and grows for the space of three years, and then turns into the pupæ state, and emerges about July a dark brown but not unlovely moth, which lives for a few weeks and then lays its eggs and dies.

The boring was completed and was rammed full of coarse powder, and the mouth of the hole plugged up with a piece of wood. Through this plug a small hole was bored, and through this a long hollow straw made into a fuse was inserted.

Setting fire to this, they retired to some distance to await the issue of their experiment.

There was unfortunately a cow in the same meadow, and this cow was very much interested in their movements; so when they left the tree the cow approached, its curiosity the more aroused by the smoke rising from the burning fuse.

“Now there is an instance of unreasoning curiosity which animals possess. That cow will poke her nose into that tree, and get blown up for her pains if we don't stop her. Let's shy stones at her.”

But stones in that marshy meadow were not easy to procure, so they tore up clods of earth and threw them at the cow. She scampered away, but went to the other side of the tree and again approached it. The boys dared not go any nearer to the old willow, because they momentarily expected the explosion, and they were in a great fright lest the cow should suffer damage. Just then, with a loud report and much smoke the powder exploded. They threw themselves down to avoid any errant fragments, and the cow scampered off unhurt, but exceedingly astonished and frightened, jumped the ditch which separated the meadow from the next one, and finally landed herself in another ditch, from which she had to be drawn with ropes and a vast deal of trouble by some of the neighbours.

The first thought of the boys was to see after the cow, and when they saw she was in a fair way of being pulled out, they returned to their tree, and found it split and torn to pieces and thrown about in all directions. It was quite a chance whether they found any caterpillars in the tree or not, and, to tell the truth, they hardly expected to be successful in their search. What was their delight then to find, that not only were there caterpillars there, but a great number of them. Three or four they found dead and mangled by the force of the explosion, but the many perforations in the wood showed that there were many more caterpillars there. With the aid of a saw and axe they dug out several caterpillars not yet full grown, and also several pupæ which they knew would be out in two months'

time. They carried some large pieces of the wood up to the boat-house for living caterpillars to feed on, and reinserted the pupæ in their wooden chambers, where they were safely kept until their appearance in July.

The caterpillars of the white butterflies which Dick had collected under Mary's instructions had some time since come out, and it was a very pretty sight to see the chrysalis split at the head and the insect creep out with its wings all wet and crumpled, and then to watch them gradually expand to their full size and dry and harden, until the perfect insect was ready for flight, when with a few flaps of its wings, as if to try them, it would launch into the sunshine with a strong swift flight.

CHAPTER VII.

A Trial Sail.—Preparing for a Cruise.—Charging a Reed Bed.—An explosion of Birds.—The First Adventure.—Orange-Tip Butterfly—No Salt.—How Salt is obtained.

THE project of the cruise was not allowed to drop. The more the boys thought about it the more they determined to take it. The first thing to do was to obtain the consent of their elders. Mr. Merivale had no great objection to it. Sir Richard Carleton was so pleased with the rapid improvement in the health and spirits of his son that he would have consented to anything he proposed. Indeed, he was so anxious to help the boys in all their undertakings, that he would have spoilt them too much had it not been for the advice of Mr. Merivale, who said to him—

“Don't let the boys think they can have anything they like for the asking, or you will spoil their independence of character. Depend upon it they will find far more delight in making things for themselves than in having them bought for them, and it will do them more good.”

Sir Richard saw the wisdom of this advice, but he insisted upon giving them a book on botany; and one day when the

boys went into the boat-house they saw on the shelves a nicely bound copy of Ann Pratt's *Flowering Plants of Great Britain* in six volumes. This was a great acquisition to them, and Jimmy, in the fulness of his delight, got upon the table with a volume under each arm, and executed a war-dance of exultation.

The consent of the ladies was far harder to obtain. Mrs. Brett said she would see what Mrs. Merivale said; and Mrs. Merivale was afraid that it would not be safe, and for some days she hung back, and would not say "yes" or "no," although Frank pleaded hard with her. His mother was very much afraid of the water. She did not like to see yachts heeling over as if they were going to be upset, and she thought the boys were not old enough to manage a yacht by themselves. Frank at last persuaded her to take a sail in the *Swan*, and see for herself how safe it was, and a day was fixed when everyone should have a sail on the Broad, and try the capacities both of the yacht and of the boys as sailors. When the day arrived, however, Frank put them off, saying it was not convenient. Mr. Merivale smiled as he guessed the reason. It was blowing a stiff breeze, and sailing on such a day would not reassure a timid woman. The next day, however, was fine, and came with a gentle breeze, just rippling the surface of the water, and with a confident air, Frank got his party on board. The sail was quite a success. The yacht glided about on an even keel, and Frank, who was at the helm, carefully avoided any abrupt motion in tacking or gybing.

"You see it is quite safe, mother," said he.

"Yes, my dear, I suppose it is, and I suppose you must go, as you have set your heart upon it; but how can you possibly think of sleeping in that small cabin?"

"One of us will sleep at each side, and the third will sleep in a hammock stretched across the middle."

"But you will be suffocated, dear."

"Have no fear, mother, we will see to the ventilation."

So they obtained permission to go, and, as time was an object, they set to work with great vigour to prepare for their voyage. They made a hammock out of an old sail. Their beds were formed of cushions placed on the bunks on either side of the cabin. To prevent the necessity of tucking in their bedclothes they adopted a well known dodge of yachtsmen; which is to

double the sheets and blankets, and sew the sides and bottoms together, so as to form a bag into which they could creep. They took fishing-tackle with them, and also their old muzzle loader. Dick took his butterfly net, Jimmy a quantity of newspapers in which to dry plants, and Frank an opera-glass, with which to watch the movements of birds at a distance. Frank also took care to see to the eating department, and with his mother's help he got a very fair stock of provisions on board. The day at length arrived for their departure. It was the Monday in the last week of May. At eight o'clock in the morning they bade farewell to Mary and Florrie, who had come to see them off, hoisted their sails, and away they went before a light breeze from the northward. A cheer broke from them as they found themselves fairly afloat, and the boat-house grew smaller in the distance behind them, and the waving handkerchiefs of the two girls could be seen no longer. It was a beautiful morning, and their spirits were high. Holidays, sport, and adventure lay before them, a stout boat under them. There were no three happier boys in the world.

They sailed slowly through the narrow outlet of Hickling Broad into Whiteslea Pool, and through another narrow passage into Heigham Sounds.

A dyke called the Old Meadow Dyke ran from the Broad on the left into Horsey Mere; and Frank proposed making a detour along this and exploring Horsey Mere, but the other boys were too anxious to get on. It was too near home to begin to explore. In the middle of Heigham Sounds, which is a good sized sheet of water, was a large bed of reeds, such as is locally called a 'rond.'

"Let us go slap-dash into that. We shall be sure to find some nests," said Frank.

"All right," said both Jimmy and Dick. So Frank put the helm up, and the yacht drove on before the wind, surging through the rustling reeds, which bowed and bent before her, until she came to a standstill well into the heart of the rond.

"Down with the sails," said Frank, and the halyards were let go and the sails came down with a run. As the yacht crashed into the rond there was quite an explosion of birds from it. Water-hens, coots, and marsh-tits flew out on both sides, and from the centre of it rose a little duck with a bright, chestnut-coloured head and neck.

“That is a teal,” said Frank, “we shall find her nest here, so look carefully.”

They jumped into the shallow water, having first taken off their shoes and stockings, and began to hunt about for nests. They speedily found several coots' and water-hens' nests, and also a dab-chick's; but they wanted none of these, and continued their search for the teal's nest. At last—

“Here it is,” said Dick delightedly, and sure enough there the nest was, in a small bush which grew in the very centre of the rond, where the soil was pretty firm. The nest was large and thickly lined with feathers, and it contained twelve cream-coloured eggs. They took six of them, and then, satisfied with their spoil, they went back to their yacht, and tried to push her off again. But this was no easy task. They pushed and pushed, until they were exhausted, and the only effect their pushing seemed to have was to push their own legs deeper into the mud. The yacht refused to be moved.

“Well, this is a pretty go, to be wrecked at the very beginning of our cruise! We have run her almost high and dry. How they will laugh at us at home!” said Jimmy.

“They sha'n't have the chance of doing that. We will get her off somehow or other. We ought to have gone to leeward of the rond, and run her up in the wind's eye into it, and then we could have backed her off with the sails,” said Frank.

“Live and learn,” said Dick. “I vote we strip and go overboard again and try to lift her off. We can get the oars from the boat, and use them as levers.”

This was undoubtedly the best thing to do, and although the water was not over-warm, they took off their clothes and worked and pushed away, until they made the mud around the yacht as soft as a pudding, and themselves as black as negroes. Then the yacht moved a little, and putting forth all their strength they shoved her back into deeper water. Not waiting to dress themselves, they ran the sails up and steered away for the Kendal Dyke at the south-east end of the Broad. They meant to stay at the mouth of the Broad to bathe and dress. There was no one to see them, so it did not matter. As they neared the mouth of the dyke, to their great dismay a yacht with several people on board came out of it. The people stared in blank astonishment at the strange double-bodied yacht and her still stranger crew. Jimmy and Dick dived at once into the

cabin. Frank could not leave the helm, and yet could not stay where he was ; so without further thought he plunged into the water at the stern of the yacht, and, holding on by the rudder, he contrived to keep her on her course until Jimmy reappeared with something thrown over him, and took hold of the tiller. When they came to an anchorage in a secluded spot among the reeds, they bathed and dressed.

"Well," said Dick, "if we go on having adventures at this rate, we shall have plenty to tell when we get home."

"I like adventures, but these are not the sort I like," said Jimmy.

"Well, never mind, better luck next time," said Frank, soothingly.

Sailing through Kendal Dyke, which in places was so narrow that the *Swan* brushed the reeds on both sides as she passed through, they reached the Hundred Stream, and, turning to the south-westward, they sailed, with no further adventure, until they came to Heigham Bridge, where they had to lower their masts in order to get through. While Frank and Jimmy did this, Dick took his butterfly net, and went after an orange-tip butterfly, which he saw flying past. This butterfly is one of



ORANGE-TIP
BUTTERFLY.

the first which makes its appearance in the spring, and it is one of the prettiest. It looks as if a bunch of red and white rose petals had taken to themselves wings and fled. It is a small butterfly, having an orange-red tip on the ends of its forewings. The male only has this ornament. The female has only a greyish black tip. The under surface of the wings of this pretty insect is no less beautiful than the upper. It is white, with bright green marblings, or what appear as bright green to the naked eye. When looked at through the microscope it will be found that the green appearance is caused by the mixture of black and bright-yellow scales. (I suppose that most of my boy readers will know that the dust which is so easily rubbed off a butterfly's wings is in reality a coating of scales arranged one over the other like feathers, and of very exquisite shapes.) The caterpillar of the orange-tip is green, with a white stripe on each side, and the chrysalis is very peculiar in shape, tooth-like, and pointed at both ends.

Dick was a long time away ; and when he came back, flushed

with exercise, he had no less than eight orange-tips in his net, which he proceeded to kill and set there and then.

They sailed on very slowly, for the breeze had fallen, until they came to the Thurne Mouth, and then they turned up the Bure until they came to St. Benedict's Abbey, the ruins of which stand on the northern bank of the river. Here they determined to camp for the night, and accordingly ran their boat into a marshy creek, and made her fast to the reeds. They were much amused at the remarks of the people whom they passed, whether on the bank or on board the wherries and yachts. The like of the *Swan* had never before been seen on Norfolk waters. She was a *rara avis in terris* and excited any amount of appreciatory and depreciatory comment.

After making the boat snug and comfortable, the boys proceeded to cook their dinner. They brought out from the lockers some cold beef and ham, and boiled the potatoes in a small tin saucepan over the spirit-lamp. The meal was soon ready, and they sat down to it with most excellent appetites.

"Where have you put the salt, Frank?" asked Dick.

"The salt?" replied Frank, thoughtfully.

"Yes, the salt."

"Well, let me see. Dear me, we must have forgotten it."

"But Frank, how can you—how can anybody eat beef without salt?" said Jimmy reproachfully.

"Never mind, we will get some to-morrow," said Frank, looking guilty.

"There are no shops about here, and there are no salt-mines in the marsh," said Jimmy, who refused to be comforted.

"Talking about salt-mines, have you ever been down one?" said Frank, who was eager to turn the subject.

"No; have you?"

"Yes, and a jolly sort of place it is."

"Then tell us all about it as a punishment."

"It was at Northwich, in Cheshire, last year, when I was on a visit to my uncle. We drove over one day to look at the mines. They get an enormous quantity of salt from that district, and it is of two kinds, the white table salt and that dark lumpy salt they put in fields for cattle. They get the white salt from brine-pits, which are full of salt water. The water is pumped up and put into basins until it evaporates, and the white salt is left behind. There must be big holes in the

earth filled with salt water, for as it is pumped away the surface of the earth caves in, and the houses lean against each other in a very tumble-down sort of fashion. The brown or rock-salt is dug out of mines, and we went down one of these. My cousin and I went down in a tub hardly large enough to hold us, and a workman clung to the rope above our heads. The shaft was dirty, narrow, and crooked, and we bumped finely against the sides. I didn't like it at all, I assure you; and when we cleared the shaft and hung suspended over a vast cavern, at the bottom of which were some dim lights, I felt rather in a funk. The man below reached up to us with a long pole, and pulled us away from the end of the shaft for fear of falling stones, and then we were lowered to the ground, and stepped out of the bucket and looked about us. We were in a very large cave, the roof of which was supported by immense square pillars of the salt rock. It was brown, of course, but it was quite translucent, and the light gleamed from it very prettily. Our guide lit a piece of magnesium-wire, and I never saw anything so magnificent in my life. The whole place seemed set with precious stones, and the dirty, half-naked men, leaning on their tools, looked as picturesque as you could well imagine. Then one of the men had finished boring a blast hole, and we waited while he filled it with powder and fired a shot. We all huddled in one corner of the cave, and then there was such a roar and smoke! The rock under our feet heaved and shook, and pieces of rock and stone flew about far too near for my liking."

"I never knew how salt was got before," said Dick.

"Nor I," said Jimmy; "and as Frank has told us so well we will forgive him for forgetting the salt."

CHAPTER VIII.

An Eerie Night.—A Ghostly Apparition.—The Barn Owl.—A Will-o'-the Wisp.—The Ruff and Reeve.—Snaring Ruffs.—A Nest.—Wroxham Broad.—Mud-boards and Leaping-pole.—Wild Duck's Nest in a Tree.

As the night fell the wind rose and moaned dismally over the marsh, and black clouds covered the sky, so that the night promised to be dirtier than usual at this time of the year. Lonely marshes stretched far and wide, with nothing to break their wild monotony save the ghostlike ruins of the Abbey in the foreground. It was not a pleasant night for the boys to spend out for the first time alone, and an eerie sort of feeling crept over them in spite of their efforts to appear at ease.

At length Dick said—

“I feel as if wild beasts were prowling about on the watch for us, and that if we went to sleep we should be eaten up alive.”

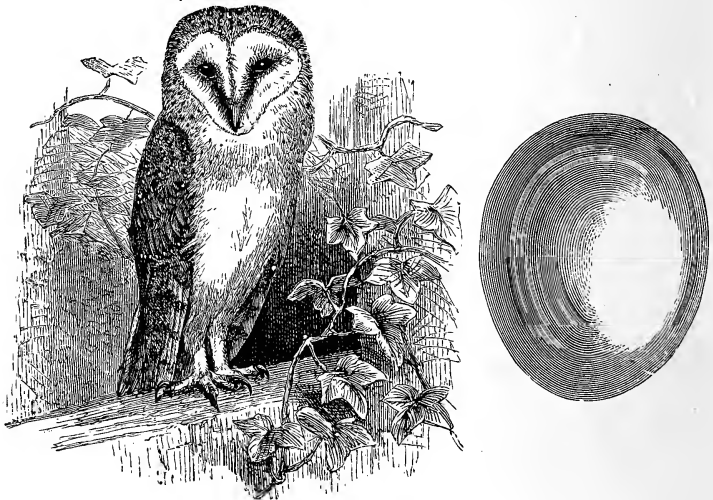
“So do I,” admitted Frank; “but I suppose it will wear away in time. But what is that?” he exclaimed, in a startled tone, as an unearthly cry sounded among the ruins of the Abbey, and a white shape was dimly seen gliding between the broken windows.

The boys gazed in breathless silence at this apparition. The cause of their alarm, however, was made plain to them, as a white owl came forth on noiseless wings, and fluttered stealthily over the marsh. They laughed heartily at their fright, but their laugh sounded forced and unnatural. It was so weird and lonely outside, that they went into the cabin and lit the lamp, and strove to make a cheerful supper. Then they undressed and tried to make themselves comfortable for the night. Frank took the hammock, and Dick and Jimmy the berths at each side. They left the lamp burning dimly for company's sake, but they could not go to sleep. The water lapping against the planks of the yacht and amid the stems of the reeds, the wind sighing over the waste fen, and

the strange cries of the night-birds—the call of the water-hen, the hoarse bark of the coot, the cackle of wild ducks, and the host of other noises which they could not account for, kept them awake and on the *qui vive*.

“What’s that?” said Dick, after they had been quiet for some time.

A noise like a clap of thunder was to be heard, repeated at regular intervals, and growing louder, as if approaching them. They rushed on deck to see what was the cause of it, and were relieved to find that it was only a belated



THE BARN OWL AND EGG.

wherry beating up to windward, her canvas flapping each time she put about on a fresh tack. The men on board of her shouted “Good night” as they passed, and after this the boys felt more comfortable, and again courted sleep. They were just dropping off, when “patter, patter,” went something on deck. Some one, or some thing had boarded them, and Frank went out to see what it was. A coot had come aboard to see if there might be anything eatable there, and she flew away as

Frank appeared. He looked about ere he went down again, and to his astonishment he saw a spot of light dancing about on the marshes in a place where he thought no human being could be at this hour.

"I say, Dick and Jimmy, here is a will-o'-the-wisp dancing about on the marshes."

They came quickly on deck, and watched the strange light, which now and then disappeared, and then again became visible. It now shone bright, and then faint, and an uncertain glimmer beneath it showed that it hovered over the water as well as over the marsh.

"There is no such thing as *ignis fatuus* nowadays," said Jimmy, "so what can it be?"

"I vote we go and see," said Frank.

"You will only get bogged if you do. It is dangerous enough to walk on the marsh in the daylight, and almost impossible by night."

"It strikes me there is a narrow channel, or dyke, leading from the river, which may lead to where that light is. I saw a line of water about twenty yards off. We passed it as we were about to anchor. Let us take the boat and go up it, if you wish to see what it is," said Jimmy.

His suggestion was approved of, and they dressed and stepped into the punt, and after a little while they found the dyke and pushed their way along it. They moved cautiously and with little noise, and at last emerged upon a small open piece of water, and as they did so, the light gleamed for a moment and went out. They peered eagerly through the gloom, but could see nothing. All was silent and still, and very uncanny.

"It is no good staying here," said Frank; "let us go back and try to sleep, or we shall not be fit to be seen to-morrow when we meet the others at Wroxham."

So they rowed back, wondering what the cause of the light had been. They tumbled into their berths again and got just an hour's broken sleep before the dawn effectually aroused them. It was very early, but they had no choice but to rise and get something to eat. The morning was bright and cloudless, the lark sang merrily in the sky, waterfowl swam on the quiet stretches of the river in peaceful security, the freshness and charm which always accompanies the early dawn

of day in the country had its natural effect upon them ; and their spirits, which had been somewhat depressed by the uncomfortable night which they had passed, rose again to their natural height. Dick now suggested that they should again explore the windings of the creek, and try to find out the cause of the mysterious light which had so puzzled them the night before. They accordingly rowed up the lane of water as they had done the previous night, until they came to the piece of open water. Just as they were about to emerge from the narrow opening in the belt of reeds which surrounded it, Frank checked the motion of the boat by clutching hold of the reeds, and warned his companions to be silent. Looking in the direction in which he pointed, they saw the most curious bird they had ever seen, or were ever likely to see. On a little hillock on the edge of the reeds was a bird with a body like a thrush, but with long legs. It had a long beak, staring eyes, brown tufts of feathers on each side of its head, and a large flesh-coloured ruff of feathers round its neck.

“ I know what that is ; it is a ruff,” said Jimmy.

“ Yes, yes, but be quiet and watch it.”

They drew back behind the green fringe of reeds and watched the movements of the ruff, for such it was. Its movements were as strange as itself. It pranced up and down on the little hillock and fluttered its wings, and uttered a defiant cry. It seemed as if it were particularly desirous of attention from one spot in the marsh, for towards that spot its glances and movements were directed. Looking more eagerly towards this spot the boys saw a smaller bird, with no ruff around her neck, and clad in sober brown. This was a female, or reeve, and the male was showing himself off before her and trying to attract her attention, while she, with the tantalising nature of her sex, appeared to be quite unconscious of his blandishments, and went on composedly picking up her breakfast from the insects and worms in the marsh. Presently another ruff appeared on the scene, and, joining his rival on the little hillock, he commenced to emulate his performances, and the two danced a war-dance in the most amusing fashion, to the great delight of the three observers. The natural consequence of this rivalry soon followed, and the two ruffs began to fight in good earnest, laying hold of each other with their bills, and striking with their wings. The one drove the other to the

bottom of the hill, and was apparently master of the field; but instead of returning to his post on the top, he flew away, leaving his adversary fluttering vainly, and evidently fast by the leg. Then the rushes on the other side of the open space were pushed aside, and a man in a rude boat made his appearance, and proceeded to seize the ruff and kill it.

"The mystery of the light is explained," said Frank. "Hallo! you there, what are you doing that for?"

The man started and looked round, answering surlily,

"What's that to you?"

"Oh, don't get into a wax. We only want to know for information's sake. What will you sell that ruff for?"

"Two shillings, sir," replied the man, in a much more civil tone.

"Well, here you are. Are there many ruffs about here?"

"No, sir, I have not seen any for the last two years until this spring. They used to be common enough when I was a lad, and I have taken a score in one morning with these snares. I have seen more than a dozen together on one hill, and twice as many reeves around looking on. Those were fine times for us fowlers, those were."

The boys asked to be allowed to look at his snares. They were made of horsehair, and were set in this fashion:—A length of hair with a running noose at each end was fixed by the middle into the slit of a peg, which was then driven into the ground. A number of these were set round the base of the hill with the nooses projecting about an inch above the surface of the herbage, and as the birds were driven off the hill they were caught by them. It was necessary, the man said, to keep a strict watch on the snares, for the birds sometimes broke away, or the rats and weasels, of which there are plenty in the marshes, would be beforehand with the fowler and seize the captured birds.

"I suppose you were setting your snares last night?"

"Ay, sir," replied the man, laughing; "I heard you coming after me, so I put my light out. I did not know what sort of men you might be, and they make believe to preserve these marshes now, and it is hard work for us to get a living."

"Don't you think there may be a ruff's nest somewhere about?" said Jimmy.

"I found one this morning with four eggs in it, but they are hard sat."

"Never mind that, we can blow them, if you will show us where it is."

"Get out of the boat, then, and come into this rond; but mind how you walk. Put your foot on the roots of the reeds, or you will go up to your middle in mud directly."

The nest was made of coarse grass, and was placed in a clump of sedges. It contained four eggs of an olive-green colour, spotted with brown. As the man said that if they did not take them he should, and sell them for what they would fetch, the boys felt no hesitation in plundering the nest of all its contents, giving the man a gratuity of a shilling for showing the nest to them.

This commercial transaction completed, they returned to their yacht and made a second breakfast.

They had arranged to meet their elders at Wroxham Bridge at twelve o'clock, and spend the rest of the day sailing and pic-nicking on the Broad, so about ten o'clock they started. The breeze was light, as it generally is in the summer; and as for a portion of the way they had to beat to windward in a rather narrow channel, it took them some time to reach Wroxham.

They found that the *Swan* was not so handy in tacking as a single-hulled yacht would have been, and they had to use the mizen to swing her round each time they put about. Their progress was, therefore, slower than they had calculated upon, and they did not reach Wroxham until 12.30. Their way was past Ranworth Broad and the two Hovetons, besides some smaller broads, all connected with the river by dykes, half hidden by tall reeds, and looking deliciously lonely, and inviting exploration. Although they were so close they could see nothing of the broads' surface, and their existence was only made manifest to them by the white sails of yachts which were now and then to be seen gliding hither and thither through forests of reeds.

Sir Richard, Mr. and Mrs. Merivale, Mrs. Brett, Mary and Florrie, were all waiting for them on the staithe by the bridge, and hailed their appearance with joy.

"Well, boys, we thought you were lost," said Mr. Merivale.

"No fear, father," answered Frank; "the *Swan* sails grandly, and we have had no end of fun."

“And how did you sleep last night? Wasn't it very lonely?” said his mother.

The boys unanimously affirmed that it had been most awfully jolly, and that they had been most comfortable.

Whilst the party were embarking, Frank went to the village carpenter's and got a stout leaping-pole with a block of wood at the end, so that it might not sink into the mud when they were jumping the ditches. He also obtained a pair of mud boards to put on his feet when walking over soft ground. These were pieces of wood a foot long by eighteen inches wide, with rope loops to slip over the feet. He expected to find them useful while bird-nesting on the marshes.

They sailed at a good pace down the river, and then, while Mary was asking where the Broad was, Frank put the helm over, and they sailed through a narrow channel, on either side of which the reeds were seven feet high, and while the question was still on Mary's lips, they were gliding over the fine expanse of water which is known as Wroxham Broad.

They had a very pleasant afternoon, and as the breeze was steady and the yacht behaved herself very well, the two elder ladies lost much of the nervousness with which they had regarded the boys' expedition. Dick was much impressed with the loveliness of the Broad. On the one side the woods came down to the water's edge, and on the other the wide marsh stretched away miles on miles, with its waving reed beds, tracts of white cotton-grasses, and many-coloured marsh grasses, which varied in sheen and tint as the wind waved them or the cloud-shadows passed over them. Here and there a gleam of white showed where the river or a broad lay, but for the most part the whereabouts of water was only shown by the brown sails of the wherries, or the snow-white sails of the yachts, which glided and tacked about in a manner that seemed most mysterious, seeing that there was no water visible for them to float on.

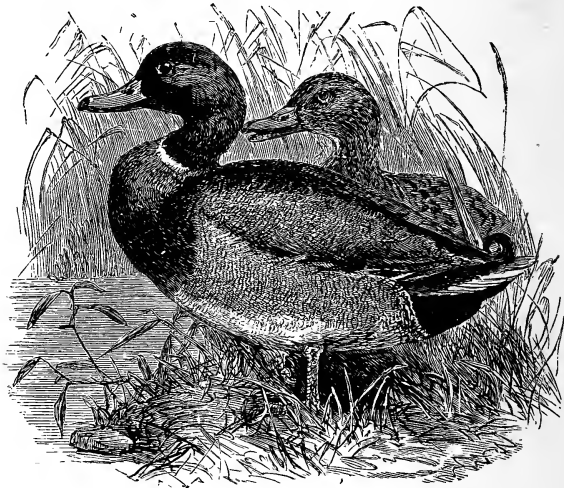
At one end of Wroxham Broad is a labyrinth of dykes and pools, between wooded islands and ferny banks. The boys took the two girls in the punt through this charming maze, and they pushed their way through the large floating leaves of the water-lily, and the more pointed leaves of the arrowhead, gathering the many-coloured flowers which nestled amid the luxuriant

growth of plant-life that fringed the water, stooping to avoid the trailing branches of the trees, and enjoying themselves mightily in exploring.

"Is that a crow's nest in yonder tree?" said Jimmy.

"I expect so, and there is the bird on, but her head does not look like a crow's. Hit the trunk with the oar," said Frank.

As the blow vibrated through the tree, the sitting bird flew off, and what do you think it proved to be? A *wild-duck!*



WILD DUCK.

The boys were astounded. They had heard of ducks building in hollow trees, and at some distance from water, but to build a nest on the top of a high tree seemed incredible, so Frank said he would climb up and see the eggs, but—

"Let me go," said Dick, "I have never climbed a tall tree, and it looks an easy one, although it is tall, for there are plenty of branches."

"Oh, please take care, Dick," said Mary.

"Oh, he will be all right. You never tell me to take care, young woman," said Frank, laughing, while Mary blushed.

Dick was soon up the tree, showing skill worthy of a practised climber, and rather to the surprise of his companions.

"It is a duck's nest in an old crow's nest, and there are ten eggs in," shouted Dick from his lofty perch.

"Bring two of them down then. We will write on them where they were found. I wonder how the old birds get the young ones down to the water? They can't fly for a long time after being hatched, and they must take to the water soon, or they will die."

The question which Frank put has never been satisfactorily answered.

The young ones must either perch on their mother's back, and hold on whilst they are being transported to their native element, or the old bird must seize them in her bill, like a cat does her kittens.

When the others left, the boys sailed down stream again by the light of the red sunset and as night stole over the marshes, they anchored by Horning ferry, and so tired were they that they fell asleep the moment they laid themselves down, forgetting their fears of the night before. They turned in at ten, and none of them awoke until eight the next morning.

Before breakfast Frank and Jimmy spent some time in teaching Dick how to swim, and found him an apt pupil.

CHAPTER IX.

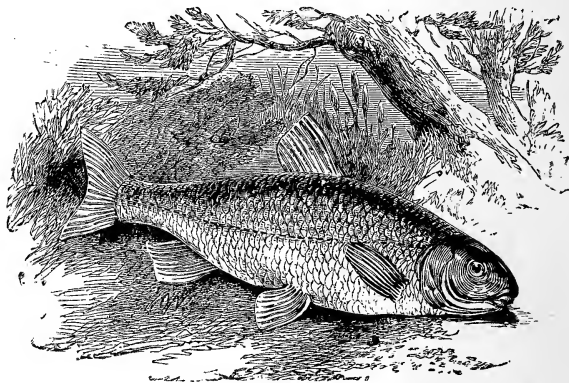
Chameleon.—Light Coloured Eggs.—Sitting Birds have no Scent.—Forget-me-nots.—Trespassing.—The Owner —A Chase.—Capture.—Pintail Duck.—Drumming of Snipe.—Swallow-tail Butterfly.—A Perilous Adventure.

THE young voyagers had by this time discovered that sailing about in the manner they were doing gave them tremendous appetites, and on this particular morning they found they had run short of bread and butter, so Jimmy was despatched to the little shop at Horning to procure some.

After breakfast they were lounging on deck waiting for a

breeze. Dick was sprawling on the roof of the cabin basking in the sun. Frank was fishing for roach in the clear slow stream, and Jimmy was perusing the newspaper in which the provisions had been wrapped. It was a still, lovely morning. White clouds sailed quickly across the blue sky, but there was no breeze to move the marsh grasses and reeds, or to ripple the placid stream. A lark sang merrily far above them, filling the air with melody. Small birds chirped in the sedges, and the water-hens and white-headed coots sailed busily to and fro.

Jimmy looked up from his paper just as Frank pulled in a good sized roach, and said,—



ROACH.

“Do either of you know how the chameleon changes its colour?”

Upon receiving an answer in the negative he read as follows from the paper in his hand :—

“M. Paul Bert has laid before the French Academy a *résumé* of the observations of himself and others on the colour-changes of the chameleon. They appear to be due to change of place of certain coloured corpuscles. When they bury themselves under the skin, they form an opaque background to the cerulescent layer, and when they distribute themselves in superficial ramifications, they either leave the skin to show its yellow hue, or give it green and black tints. The movements

of the colour-corpuscles are directed by two orders of nerves, one causing their descending, and the other their ascending, motions. In a state of extreme excitation the corpuscles hide below the skin, and do so in sleep, anæsthesia, or death. The nerves which cause the corpuscles to go under the skin have the greatest analogy to vaso-constrictor nerves. They follow the mixed nerves of the limbs, and the great sympathetic of the neck, and do not cross in the spinal marrow. The



CHAMELEON.

nerves which bring the corpuscles upwards resemble in like manner the vaso-dilator nerves. Luminous rays belonging to the blue-violet part of the spectrum act directly on the contractile matter of the corpuscles, and cause them to move towards the surface of the skin."

"Now, can you tell me the plain English of that?"

"Read it again, Jimmy," said Frank.

Jimmy did so.

"Well, I am no wiser. Read it again more slowly."

Jimmy did so again.

"I give it up," said Frank. What a thing it is to be a scientific man!"

"I take it," said Dick, rolling himself along the cabin roof towards them, "that it means that different coloured rays of light have corresponding effects upon coloured atoms in the skin of the chameleon. The rays of light will be affected by the colour of the place where the chameleon is, and the chameleon will be affected by the changed colour of the rays of light, so that if the beast were on a green lawn his colour would be green, and if on a brown tree-trunk his colour would be brown."

"That is my idea," said Jimmy; "but what is the good of using such stilted language, when the same thing might have been said in simple English?"

"I wonder why that water-hen keeps dodging about us in such a fussy manner," said Frank.

"I don't," replied Dick, "for there is her nest not a yard from our bows."

The mooring rope had parted the reeds, and discovered her nest, and Dick, on going to the bows had seen it. It contained twelve eggs, one of which was so light in colour as to be almost white, and one so small that it was only half the size of the others. Dick asked if it were because it was laid last, and if the pale one was so for a similar reason. Frank replied,—

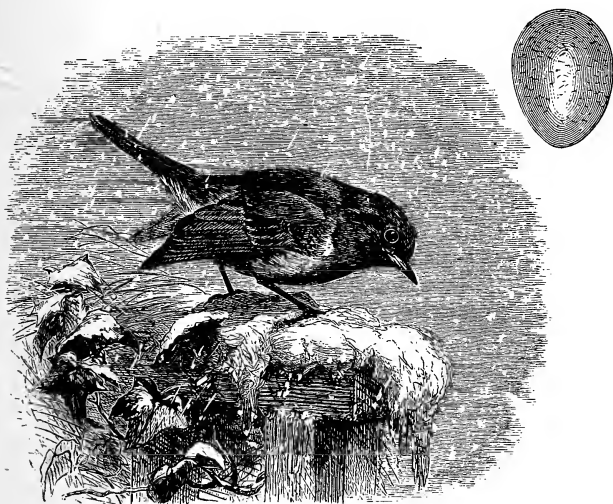
"It may be so in this case, but it does not always happen so. Last year I tried an experiment with a robin's nest. I took out an egg each day, as it was laid, and still the bird went on laying until I let her lay her proper number, five. She laid fifteen eggs altogether, but they were all the same colour and size. So I expect that it is only an accident when the eggs are like these."

"Bell told me the other day that sitting birds have no scent," said Dick, "Is that true?"

"I am not quite sure, but I am inclined to think that they have not so strong a scent as at other times. This same robin which I have just been telling you about built in a hedge-bank close by a house, and cats were always prowling about, and I have seen puss walk right above the nest while the old bird was on. If birds would only have the sense to shut their eyes, we would often pass them over, but it is easy to see them with their eyes twinkling like diamonds."

“How pretty that clump of forget-me-nots is on the opposite bank! They seem to smile at you with their blue eyes,” said Dick, who was keenly alive to all that was beautiful. “But what is that flower a little lower down, right in the water, with thick juicy stems and blue flowers. Is that a forget-me-not?”

“No, it is a brooklime, but it is one of the speedwells. There are more than a dozen sorts of speedwells, but the forget-me-not is the prettiest. Another name for the forget-me-not is water-scorpion, but it is too ugly a name for so pretty a plant,” said Jimmy, full of his recent learning.



REDBREAST AND EGG.

“Here comes a breeze at last,” cried Frank, as their blue flag fluttered, and the reeds in the surrounding marsh bent their heads together and sighed. “Shall we explore Ranworth Broad?”

“Yes, but let us take Hoveton Great Broad first, and then we can go to Ranworth as we come back,” answered Jimmy.

So they hoisted sail, and glided up stream with a freshening breeze, while swallows dipped in the river and whirled about

them as they passed. While they were sailing steadily along with a breeze on their starboard beam, the flag became fouled in the block through which the halyard of the mainmast was rove, and Jimmy was sent up to put matters right. He clambered up the mast as nimbly as a monkey, and shook loose the flag from its ignominious position. When he had finished this he looked about him, and from his greater height he could see much further than his companions, whose view was limited by the tall reeds which shut in almost every portion of the rivers and broads. The boys did not know that they were near any of the latter, but Jimmy saw on their left hand a sheet of water sparkling in the sun and studded with many reedy islands. He cried out,—

“There is such a jolly broad to leeward! It looks so quiet and still, and there are no end of water-fowl swimming about in it. A little further on I can see a channel leading to it just wide enough for our yacht. What do you say to paying it a visit?”

His friends had not the least objection. Its being unknown to them was an additional reason for their including it in their voyage of discovery. Jimmy said he should stay on his lofty perch for a time and take the bearings of the country, but as they neared the entrance to the broad and turned off before going down the narrow channel, the boom swung further out, and the jerk dislodged Jimmy, who was only saved from falling by clutching at the shrouds, down which he came with a run. They surged along through the dyke with the reeds brushing their bulwarks, and tossing and swaying in the eddies which followed their wake, and after several twistings and windings they emerged upon the broad.

At the entrance to it was a pole with a notice-board upon it, which stated that the broad belonged to Mr. —, and that any persons found trespassing upon it would be prosecuted.

“Hallo! do you see that?” said Dick.

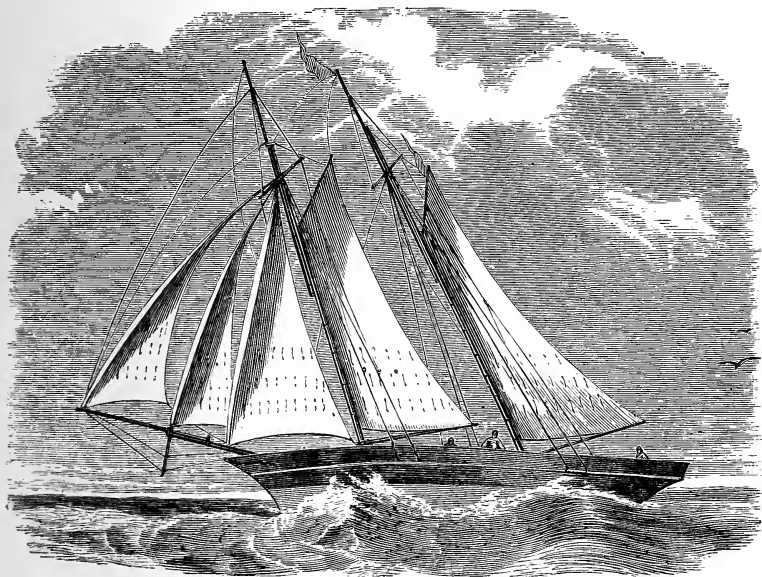
“Yes, I see it,” replied Frank, “but we could not turn back in that narrow channel, and now that we are on the broad we may as well sail about a bit. What a number of water-fowl there are!”

“I know Mr. — by sight,” said Jimmy. “He has a big blue yacht.”

The little lake was so picturesque with its islands and “ronds”

and broad floating lily-leaves, that the boys sailed about for some time before they thought of leaving it, and when they turned their faces again towards the river, what was their surprise to see a large yacht creeping along the connecting canal between them and the river. The reeds hid the body of the yacht from them, but its sails betokened that it was one of considerable size.

The boys wondered who it could be who had thought of paying the sequestered little broad a visit, never for a moment



YACHT

thinking of the owner, when the yacht shot out into the open water, and lo! it was a 'big blue yacht.'

"It is Mr. ——" said Jimmy.

"Now we shall get into a row for trespassing," said Dick.

"They have got to catch us first. If we can only dodge them, and get on to the river again, we can show them a clean

pair of heels," said Frank, taking a pull at the sheet and trying to creep up to windward of the dyke. The blue yacht, however, stood by so as to meet them, and Frank saw, by the way she went through the water, even when her sails were hauled almost flat, that she could beat the Swan in sailing to windward. A gentleman stood up in the strange yacht and called out,—

"Bear up alongside, you young rascals, and give me your names and addresses. I shall summon you for trespassing."

"Not if I know it," said Frank, bringing the *Swan* sharply round on her heel, and scudding away before the wind, followed by the other in full chase.

"Now, Jimmy and Dick, stand by the sheets, and when we get opposite the bottom of that long island, we will bring her sharp round the other side, and then they can't get across and meet us, and then we'll cut and run for the dyke."

They executed this manœuvre very neatly, but the other was too quick for them, and instead of following them round the island, they turned back and made for the mouth of the dyke to intercept them, and at a much better angle of the wind than that at which the *Swan* had to sail.

"We shall come into collision," said Jimmy, as he took a hearty pull at the mizen sheet. "We cannot both get through the dyke."

"Never mind. We'll cram her at it. Stand by with the boat-hook to push the blue 'un off, Dick!" but as Dick stood ready with the boat-hook to push off, a man stood in the other yacht with his boat-hook to pull them in, and as Dick pushed, his adversary pulled. The two boats ran alongside for a few yards, and then were jammed together at the mouth of the creek, and Mr. — stepped on board.

"Now what is the meaning of this?" he exclaimed angrily.

"We came into the broad out of curiosity, sir," said Frank; "and we could not see the notice-board until we were in the broad, and then we thought we might as well take a turn round before going out, but we are sorry you have caught us."

"Oh, are you really! Well, I want to preserve the broad for wild-fowl, so I don't like it to be disturbed; but where did you get this strange boat built?"

"We built it ourselves," answered the boys,—and then in reply to the inquiries, they told him all about it, and their object, and by the time all was explained to him they found

that he was a very jolly sort of fellow, and he found that they were very pleasant, unaffected lads, and the end of it was that they lunched with him on board his yacht, and had full permission to go on the broad whenever they liked.

Frank's attention was arrested by a pretty, light grey duck swimming about in the centre of the broad.

"Is that a pintail duck?" he inquired of Mr. —.

"Yes, and the only one on the broad, I am sorry to say. Its mate has been killed, and my man found the deserted nest with four eggs in it, among the reeds on the other side of the broad. If he has not taken it you may have it."

His man had not taken it, and in a few minutes the boys were the possessors of the eggs of this rare duck. The nest and eggs were of the usual duck type, and did not correspond in any degree with the extreme prettiness of the duck, which, with its mottled grey back and red-brown head and neck, is as fair to look at as it is good to eat.

The yachts were disengaged from their position without any damage, and the boys took leave of their entertainer with a cheer, and made for the river again.

"I hope all our adventures will end as nicely as that one," said Dick.

The wish was echoed by the others; but that very day they had an adventure which startled them considerably, and might have had very serious and fatal consequences. But of this anon.

Presently Dick said,—“I have noticed whenever we see a mud-bank that it is almost sure to be perforated by a number of small holes. What is the reason of that?”

“Oh, that is done by the snipes, when boring in search of food. Woodcocks will do it as well, and the woodcock's upper bill is so long and flexible that it can twist and turn it about in the mud with the greatest ease,” answered Frank, who was always ready with an answer on ornithological subjects.

By and by Dick was observed to be looking all about with a very puzzled and curious air, peeping into the cabin, and scrutinizing the deck and the banks with the utmost attention.

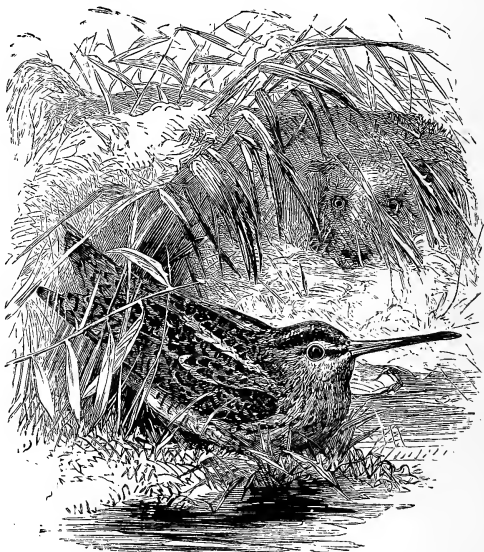
“What is the matter, Dick?” said Jimmy at length.

“What on earth is that buzzing noise? It seems to be close to us, and I can't find out the cause of it. I did not like to ask before—it seemed so simple. Is it a big bee, or wasp, or what?”

Frank and Jimmy laughed heartily, and the former said,—
“Look up in the air, Dick.”

Dick did so, and saw a bird which he knew to be a snipe, hovering somewhat after the manner of a kestrel, or wind-hover, as the country people sometimes call it. It was evident now that the noise came from it, but how was it produced, and why?

Frank could not answer either of these questions. It was a habit of the snipes in breeding time to rise and ‘drum’ in that way.



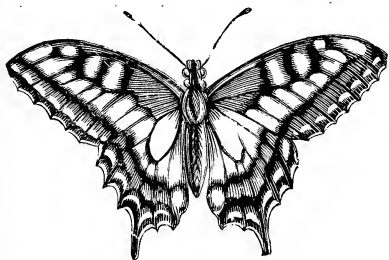
COMMON SNIPE.

“No doubt he does it for a lark, and no doubt he thinks he does it as well as a lark, but no one seems to be sure how the noise is produced. The general opinion seems to be that it is caused by a vibration of the tail-feathers.”

“Look!” cried Dick excitedly, diving into the cabin for his butterfly net. Over the marsh there fluttered one of the grandest of English butterflies, the swallow-tail. Large in

size, being about four inches across the wings, which are of a pale creamy-yellow, barred and margined with blue and black, velvety in its appearance, and with a well-defined 'tail' to each of its under wings, above which is a red spot, the swallow-tail butterfly is one of the most beautiful of all butterflies. It is rare save in its head-quarters, which are the fens of Norfolk and Cambridge, and is justly considered a prize by a young collector. Frank immediately ran the yacht ashore, and Dick jumped out and rushed at the gorgeous insect with his net. Alas! he struck too wildly and missed it, and it rose in the air and flew far away, leaving Dick lamenting. Frank laughed and said,—

“Ah, you went at it too rashly. You should have given it



SWALLOW-TAIL BUTTERFLY.

him with more of the *suaviter in modo* and less of the *fortiter in re*. Here comes another. Let me have a try!”

Dick yielded up possession of the net to him, and he advanced slowly and cautiously to where the swallow-tail was sunning himself on an early tuft of meadow-sweet, which the warm weather had tempted to bloom earlier than usual, and to perfume the air with its strong fragrance on the last day of May.

Frank's approach had too much of the *suaviter in modo*, for the butterfly flew away long before he reached it. Frank forgot all about the *suaviter in modo* then. He dashed after it at the top of his speed, making frantic dashes at it with his net, and jumping over soft ground, with utter disregard to all dangerous places. He followed it for some distance, and then he suddenly disappeared, and to their dismay they heard him shouting loudly for help.

"He has got into a bog-hole," said Jimmy, "come along as fast as you can."

They ran with breathless speed to where he had disappeared, and so deceptive are distances on flat surfaces, that they were surprised to see how far he had gone. When they reached him they saw him up to his waist in the soft bog, whose bright vivid green would have shown its danger had he not been too eager in his pursuit of the butterfly to notice it. He was rapidly sinking deeper into the mud, which held him fast with cruel tenacity, and sucked him further into its horrid embrace the more he struggled to get out of it. He had taken a big jump right into the very middle of it, and he was too far from them to reach their hands. His face was pale, but he was cool and collected.

"All right," he said, "don't be frightened. I've got the butterfly, and if you will do what I tell you, I will soon get out of this fix. Dick, do you run to the yacht and get a rope, and you, Jimmy, get some reeds, and pitch them to me to put under my arms, and keep me from sinking further into this fearful mess."

Dick sped off like an arrow, and Jimmy tore up a bundle of reeds and threw them to his friend, who had now sunk up to his shoulders, and as the reeds broke beneath his weight he sunk deeper still.

"I hope Dick won't be long, or it will be all up with me, Jimmy," he said, and brave as he was, he could not keep his lips from quivering. Jimmy was in an agony of excitement. He took off his coat, and threw one end of it to Frank, but he could not reach him. Then he did what even raised a smile on Frank's face, imminent as was his danger. He took off his trousers and threw one leg to Frank, retaining the other in his hand. Pulling hard at this improvised rope, he held Frank up until Dick came tearing up with the rope trailing behind him.

"Thank God!" said Frank, and Jimmy then knew by his fervent tone how great he knew the danger had been. Clinging to the rope, he was hauled out by his companions, and so tightly did the mud hold him, that it took all their strength to drag him out. They walked slowly and quietly back to the yacht, and Frank changed his clothes, and lay down and was very quiet for some time, and they none of them recovered their usual spirits for some time after this occurrence.

The butterfly was set, and ever afterwards kept apart in Dick's collection as a memento of this time.

Before they went home again they had got several specimens of this handsome butterfly, and still better, they discovered numbers of the bright green caterpillars and chrysalides on the meadow-sweet and wild carrot, which grew in the marsh, and so were able to breed several fine specimens, enough for their own collection and for exchange.

CHAPTER X.

Moonlight.—Instinct and Reason.—Death's Head Moth.—Bittern.—
Water-rail.—Quail.—Golden Plover,—Hen-Harrier and Weasel.—
Preserving Bird-skins.

THEY anchored that night just inside Hoveton Great Broad. The moon rose large and round, and lake and marsh slept still in her mellow light. The boys sat on deck watching the reflection of the moon in the water, and listening to the cries of the night-birds around them and the splash of the fish in the shallow margins. Dick said,—

“Is it not wonderful that the butterfly knows on which plant she is to lay her eggs? How does the swallow-tail know that she must lay them on the wild carrot or on the meadow-sweet; the death's-head moth on the potato; and the white butterfly on the cabbage? How is it that they select these plants, seeing that it is all strange and new to them? It is very wonderful!”

“Yes,” said Jimmy, “and it cannot be reason, because they can have no facts to reason from, so it must be instinct.”

“Well, I don't like talking anything like cant, and you won't accuse me of that if I say that it seems to me that instinct is a personal prompting and direction of God to the lower animals for their good, and I don't believe we think of that enough,” said Dick.

Frank replied,—“You are right, Dick, and while man has

only reason, animals have instinct and reason too. At least I believe that the larger kind of animals have some share of reason. I have never told you about our colley bitch. Last year she had pups, and she was very much annoyed by a cat which would go prowling about the building where the bitch was kept ; so the bitch took the opportunity of one day killing



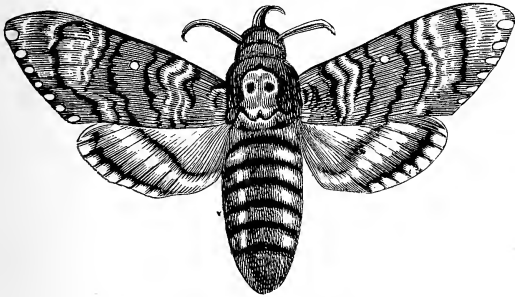
MOONLIGHT SCENE.

the cat. Now the cat had just had kittens, and all were drowned but one. When the mother was killed, its kitten cried most piteously, and had to be fed with milk by the servants. The bitch had not known that the cat had kittens, until she heard the kitten scream, and then she showed as plainly as possible that she was sorry for what she had done, and took

the kitten to her own young ones and seemed quite fond of it. Whenever it was taken away she would go for it and take it back again, and the kitten grew up with the pups, and was inseparable from them. Now I call that reason on the part of the bitch, and the desire to make amends for the injury she had done—But hark ! what is that ? ”

A low booming sound not unlike the lowing of a bull, but more continued, resounded through the marsh and then ceased. Again the strange note was heard, and the boys looked at one another.

“ What can it be ? ” said Jimmy, as the noise again quivered on the moonlit air.



DEATH'S-HEAD MOTH.

“ I know,” said Frank, “ it is a bittern. If we can only find its nest we shall be lucky. It does not often breed in England now, although it is often shot here in winter. Let us listen where the sound comes from.”

They listened intently, and after an interval the sound was again repeated. They believed that it came from a reed-covered promontory which ran out into the broad on its eastern shore.

“ Let us take the punt and go over,” said Frank ; so they rowed in the direction of the sound. They rowed round the promontory, and penetrated it as far as they could, and all was still and silent, and they discovered nothing.

Early the next morning they renewed their search, and while they were crashing through the very middle of the reed bed,

the bittern rose with a hoarse cry, and flew away with a dull, heavy flight. And there, as good luck would have it, was its nest, a large structure of sticks, reeds and rushes, and in it were four eggs, large, round, and pale brown in colour. It was not in human nature (or at least in boy nature) to resist taking all the eggs.

The bittern is a singular bird both in shape and habits. Take a heron and shorten its legs, neck, and beak, and thicken it generally, and then deepen its plumage to a partridge-like brown, and you will have a pretty good idea of the bittern. At one time it was common enough in England, but the spread of



BITTERN.

cultivation, the drainage of the marshes, and the pursuit of the collector have rendered it rare; and while at some seasons it is pretty common all over the country where there are places fit for its breeding-ground, in other years scarcely a specimen can be seen, and its nest is now but rarely found. Its curious note has often puzzled the country people. It has been said to put its head under water or into a hollow reed, and then to blow, and so make a noise something like that produced by the famous blowing-stone in the Vale of the White Horse.

The fact, however, appears to be that the noise is produced in the usual manner, and Morris says that the bittern "commonly booms when soaring high in the air with a spiral flight."

When suddenly surprised, its flight is more like that of a carrion crow when shot at in the air. If wounded, the bittern can defend itself remarkably well, turning itself on its back, and fighting with beak and claws. It cannot run well among the reeds, so when surprised it takes refuge in flight, although it is not by any means a good flier; and as the reeds grow too closely together for it to use its wings among them, it clambers up them with its feet, until it can make play with its wings. It is essentially nocturnal in its habits, hiding close among the reeds and flags by day.

Leaving Hoveton Broad, the boys sailed quietly down the river to Ranworth Broad, without adventure. They turned from the river along the dyke which led to the broad, and with their usual enterprise they tried to take a short cut through a thin corner of reeds growing in about two feet of water, which alone divided them from the broad. They stuck fast, of course; but their usual good fortune attended them, and turned their misfortune into a source of profit. A bird like a landrail, but smaller, flew from a thick clump of vegetation near them.

"Hallo, that is not a corn-crake, is it?" said Dick.

"No, but it is a water-crake, or water-rail rather, and I expect its nest is in that clump," said Frank, and his shoes and stockings were off in a moment, and he was wading to the place whence the bird had flown.

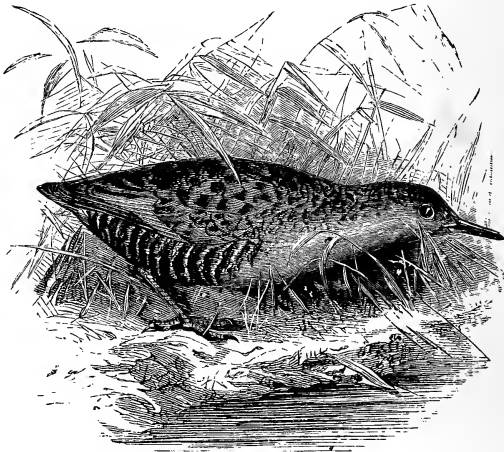
"Yes, here it is, and there are eight eggs in it, very like a landrail's, but much lighter in colour and a little smaller. I say, if we hadn't seen the bird fly away we should never have found the nest, it is so carefully hidden. I shall take four eggs. They are not sat upon, and she will lay some more until she makes up her full number, so it is not a robbery."

The water-rail is one of the shyest of water-birds. It creeps among the herbage like a rat, and is very difficult to put to flight. When it does fly, its legs hang down as if it had not strength to hold them up, and it flies but slowly, yet during the winter time it migrates long distances.

The boys spent but little time on the broad, for they were anxious to get further away from home; so, as there was a strong breeze from the west, they ran before it as far as Acle,

where they had to lower their mast in order to pass under the old grey stone bridge.

Leaving the yacht moored by the Hermitage Staithe, they walked to Filby and Ormesby Broads, an immense straggling sheet of water with many arms about three miles from the river. They hired a boat, and rowed about for some time, seeing plenty of wild-fowl, but meeting with no adventure worth recording. The broad is connected with the river by a long dyke called by the euphonious name of Muck Fleet, but it is not navigable, being so filled with mud and weeds. The growing obstruction

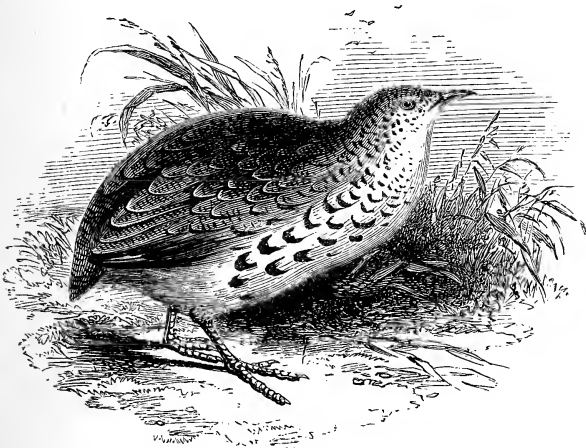


WATER-RAIL.

of this dyke is an illustration of the process which is going on all over the Broad district day by day. Formerly a much larger portion of it must have been water, but as the reeds grew they decayed, and the rotten matter formed soil. This process was repeated year after year and is going on now. The reeds extend each year and form fresh soil each winter, and so the parts which were always very shallow become filled up, and the extent of marsh increases; and then, as the extent of marsh increases, it is drained and becomes firm, and then is finally cultivated,

and waving corn-fields take the place of what was once a lake, and then a marsh, and instead of pike and wild-fowl there are partridges and pheasants.

On the way back to Filby the boys took it into their heads to have a game of 'follow my leader.' Frank was chosen as leader, and he led them straight across-country, scorning roads and paths, and choosing the hardest leaps over dykes and fences. Across a meadow Frank saw a very stiff thorn-fence on the other side of which was a stubble-field. Collecting all his strength, he made a rush at it, but failing to clear it, his foot caught near the top, and he fell headlong into the next



AFRICAN BUSH QUAIL.

field. Dick followed his leader with commendable imitation, and sprawled on the top of him ; but Jimmy could only breast the hedge, and sat down on the spot whence he had taken his spring. Dick was up again in a moment, but Frank remained kneeling on the ground with something between his hands.

“What is it, Frank?” said Dick.

“A bird. I fell upon it. It was on its nest, and I have smashed three of the eggs, but there are five left.”

Jimmy joined them, and asked what kind of a bird it was. It was a bird of about eight inches in length, grey in colour, plump, and with a shape which reminded them of the guinea-fowl. They looked at the poor trembling bird, and at its eggs, and came to the conclusion that it was a quail, a supposition which turned out to be right. Quails, though rare generally, were very common that year in Norfolk and Suffolk, and many nests were found, two more by the boys themselves. The nest is simply a collection of dry grass in a hollow in the ground.

Morris says of the quail :—

“Quails migrate north and south in spring and autumn, and vast numbers are taken by bird-catchers. As many as one hundred thousand are said to have been taken in one day in the kingdom of Naples. Three thousand dozen are reported to have been purchased in one year by the London dealers alone. They migrate in flocks, and the males are said to precede the females. They are believed to travel at night. They arrive here at the end of April or beginning of May, and depart again early in September. Not being strong on the wing, yet obliged to cross the sea to seek a warmer climate in the winter, thousands are picked up by the shores on their arrival in an exhausted state ; many are drowned on the passage, and some are frequently captured on board of vessels met with *in transitu*.”

I have seen them in poulterers' shops kept in large cages, until they are wanted for the table, and they seemed to be quite unconcerned at their captivity, feeding away busily.

Frank said,

“What shall we do with the bird? I've broken her wing, but I don't think she's much hurt anywhere else.”

“Here's some thin twine,” said Dick. “Let us tie the bone to a splint of wood with it, and the wing may heal.”

They carried the suggestion out with great care, and the quail, on being allowed to go, ran away with a drooping wing, but otherwise little the worse.

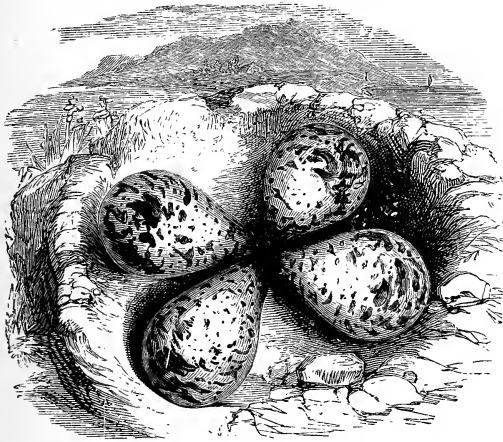
“I suppose we must take all the eggs,” said Frank, “for she will not come back to her nest now, as it is all wet with squashed egg.”

"Those are not lapwings flying above us, are they?" said Dick.

"No, they are golden plovers. They are not half so pretty as the lapwings. They have no crest, and are much plainer in plumage, and they have more black on them. Look out for their nests in this marshy spot."

"Here is one," said Dick.

"No, that is only a lapwing's, and in a very clever place too; the nest is made, or rather the eggs are placed on the



NEST OF GOLDEN PLOVER.

top of a mud-hill, so that when the water rises the eggs will be kept dry."

"Here is a golden plover's, then," said Jimmy, pointing to a depression in the ground, in which were four eggs of the usual plover type, about the same size as the lapwing's, but more blunt in outline, and lighter in ground colour.

"Yes, those are they. Take two of them."

It must not be supposed that I mention all the nests and eggs the boys found in their rambles. Space forbids me to

notice more than those which are rare or unusual. For the nest of one rare or uncommon bird they found a dozen of the commoner sorts, for they were very quick observers.

The wind had fallen, and the water was as smooth as glass. While prowling about the margin, "seeking what they might devour," Dick stooped to pick a flower which grew by the water-side, and saw the head of a large eel protruding from the mud on the bank, about two or three feet below the surface. He called his companions' attention to it, and on looking more closely they saw at intervals the heads of several more, which poked two or three inches out of the mud. If the water had not been so still and clear, they would not have been able to see them.

"What are they in that peculiar position for?" said Dick.

"Oh, it is a habit of theirs. They are taking it easy, and watching for any little nice morsel to float by them. When the evening comes they will come out altogether. I will show you how to sniggle them."

"Do what?" said Dick.

"Wait and see, old man."

They went back to the Hermitage, and Frank borrowed a stocking-needle from a woman at the house. He next got some fishing-line from the yacht and whipped one end of it to the needle from the eye to the middle. He next got a long pea-stick from the garden, and dug up some lob-worms, and then went to the mud-bank where the eels were.

Frank baited his tackle by running the head of the needle quite up into the head of the worm, letting the point come out about the middle. Then he lightly stuck the point of the needle into the end of the stick, and with the stick in one hand and the loose line in the other, he went quietly to the side, and selecting an eel, he presented the worm to its nose. The eel opened its mouth and took the worm in. Frank gently pulled the stick away and slackened the line, and the eel swallowed the worm head first. When it had disappeared down the eel's throat, Frank struck, and the needle, of course, stuck across the eel's gullet. Frank kept a steady hold upon him, and drew him out of his fastness inch by inch, until he was clear of the mud, and then he lifted him out of the water. It was a fine eel of two pounds in weight.

"Why, what grand fun that is!" said Dick. "Let me try,"

and so enthusiastically did he set to work, that in an hour's time he had got eight large eels.

They now went on board to make their fourth meal that day, it being then half-past four o'clock. Afterwards they all wrote their letters home.

The next morning about nine o'clock they hoisted sail, and started, intending to reach Yarmouth that day. A strong breeze, almost amounting to a gale, blew from the west, and they were obliged to take in reefs in both the main-sail and the mizen, and then they spun along at a very good rate, the water foaming at their bows and surging in their wake. Above them and to the eastward the sky was blue and without a cloud, but in the west a huge black cloud was slowly rising. Against its gloom, the sunlit marsh, the windmills, and the white sails of the yachts stood out brilliantly clear, and a number of gulls which were flying over the marsh shone out dazzlingly white against it.

"What bird is that? It is a hawk no doubt, but it looks so blue in this light," said Jimmy, pointing over the marsh to where a large hawk was flying in circles uttering screams, and every now and then swooping to the ground.

Frank got out his glass and took a long look at it.

"It must be a hen-harrier," he said. "I can see it quite clearly. It seems to be very angry with something on the ground. Run the yacht up in the wind, Jimmy, and let us watch it."

"There is another harrier flying to join it as swift as the wind. It is larger and browner, and must be the female," said Frank, describing their movements as he saw them through the glass.

The second comer swooped down to the ground and rose with some long struggling object in its talons which seemed to be a weasel or stoat. Frank then through his glass distinctly saw the weasel seize the hawk by the throat, and the hawk, screaming wildly, rose high into the air—"towering," as a sportsman would say—until it was almost a speck, and its mate accompanied it, circling round it, and also uttering savage screams. Then the hawk and weasel fell through the air, turning over and over, and came plump upon the marsh. The boys landed and went to the spot, while the other hawk slowly circled far out of sight. On reaching the spot they

found the hawk dead, and the weasel still alive but stunned. It was soon despatched, and they examined the beautiful hawk



HEN-HARRIER.

which had fallen a victim to its bravery. The weasel's jaws were stained with egg-juice, and not far off they found the



WEASEL.

hen-harrier's nest which the weasel had been rifling when the hawk attacked it. The nest was built on the ground,

and was something like a coot's nest, large and strong in structure. It contained four bluish eggs, two of which were broken.

"I tell you what, Frank," said Jimmy, "we must stuff the hawk and weasel, and mount them just as they appeared in the air. It will make a grand group. I am sorry for the hawk, but it is a lucky find for us and our museum nevertheless."

In the meantime they skinned the hawk and weasel, and simply stuffed their skins with cotton-wool and laid them by in the locker. It is not necessary to stuff birds in their natural attitude to preserve them for a cabinet. They may be loosely stuffed with cotton-wool and laid side by side in drawers and labelled, just like eggs, and if at any time afterwards it is desired to set them up in life-like positions, the skins can be softened by letting them lie for a few days in a damp place.

They sailed at a great rate down to Yarmouth, and brought up just outside a row of wherries which were moored to the quay.

CHAPTER XI.

To the Rescue.—A Long-tailed Tit's Nest.—A Shower of Feathers.

WHEN they had made all snug, they set out for a walk through the town, and as the quay-side was not so pleasant as the open country, they determined not to sleep on board the yacht this night, but to sleep at an hotel. They therefore went to one by the beach and engaged beds. They then ordered and ate an uncommonly good dinner, at the close of which the waiter intimated to them that he had never seen any young gentlemen before who had such good appetites. After a due amount of rest they set out for a stroll. Presently they met a boy with a nest in his hand, which was evidently that of a long-tailed tit.

They watched the boy join a gang of other boys, and after some conversation they took a number of tiny white eggs out of the nest, and arranged them on the ground in a row.

“By Jove, they are going to play ‘hookey smash’ with them. What heathens!” said Frank. The boy who had brought the eggs now took a stick and made a shot at one of the eggs, and smash it went. Another boy took a stick and prepared to have his turn.

“I say, I can’t stand this,” said Frank. “Let us make a rush and rescue the eggs,” and suiting the action to the word, he ran forward, and with a well-applied shove of his foot to the inviting target which a stooping boy presented to him, he sent him rolling into the gutter. Jimmy picked up the nest and eggs, and then the three found themselves like Horatius and his two companions when they kept the bridge against Lars Porsena and his host, “facing fearful odds” in the shape of a dozen yelling street-boys.

Frank was a big lad for his age, and he stood in such an excellent boxing position, his blue eyes gleaming with such a Berserker rage, and Jimmy and Dick backed him so manfully, that their opponents quailed, and dared not attack them save with foul language, of which they had a plentiful supply at command. Seeing that their enemies deemed discretion the better part of valour, our three heroes linked themselves arm in arm, and marched home with their heads very high in air, and with a conscious feeling of superiority.

“What are you laughing at, Dick?” said Frank.

“At the cool way in which you robbed those fellows of their eggs. You had no right to do so. They *will* wonder why you did it.”

“Let them wonder. I was so savage at their spoiling those beautiful eggs in such a brutal manner. At the same time I acknowledge that it wasn’t my business, no more than if it were their own ha’pence they were smashing, but all the same I feel that we have done a very meritorious action.”

They now found themselves at the quay-side, and they stopped there some time, being much struck by the scene which presented itself to them as they gazed out over Breydon Water. The tide was flowing in rapidly, and Breydon was one vast lake, at the further end of which, five miles away, the rivers Waveney and Yare joined it, and, at the end near Yarmouth,

the Bure, down which they had just sailed. The breeze had risen to a gale, and as it met the incoming tide it raised a sharp poppy sea. The sun was setting red and splendid over the far end behind a mass of black fiery-edged cloud, through rents in which the brilliant light fell upon the tossing waste of waters, and tipped each wave-crest with crimson. Above the cloud the sky was of a delicate pale green, in which floated cloudlets or bars of gold, which were scarcely more ethereal-looking than the birds which breasted the gale with wavering flight. Out of the sunset light there came a gallant array of vessels making for the shelter of Yarmouth. Dark-sailed wherries with their peaks lowered and their sails half mast high, and yachts with every possible reef taken in, all dashing along at a great pace, notwithstanding the opposing tide, and each with a white lump of foam at its bows. The parallel rows of posts which marked the sailing course stood out gaunt and grim, like warders of the sunset gates, and the whole scene was wild and impressive. It so moved Dick, that when they got back to their hotel he sat down, and tried his hand at making some verses descriptive of it. They are not good enough to quote, but Frank and Jimmy both thought them very good, only they were not impartial critics.

As they were sitting in the coffee-room that evening, Jimmy said that he should like to see how many feathers the long-tailed tit's nest contained. It looked a regular hatful, and he wondered how the tiny bird could have had the patience to collect so many. So he drew a small table aside, and sat himself down at it with the nest before him, and then set to work to count the feathers, putting them in a pile at his right side as he did so. Dick joined him, and the two worked away for a long time at the monotonous task of counting. The feathers as they were piled up loosely on the table formed a big feather-heap.

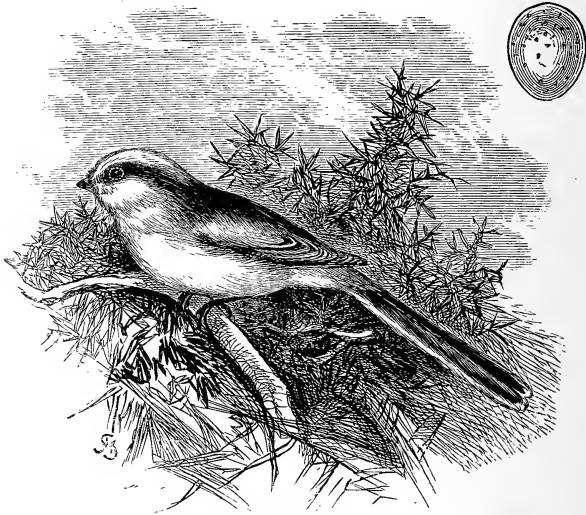
Frank grew tired of watching them, and a wicked idea entered his head. The window near which they sat encountered the whole force of the wind. Frank lounged up to it, and, under cover of a question, undid the latch.

"How many are there?" he asked.

"We have counted 2,000, and there are about 300 more. We shall soon finish."

"Shall you, indeed," said Frank, as he opened the window.

The wind rushed in, and catching the light feathers scattered them all over the room, which was full of people, some reading, some eating, and some enjoying a nightcap of toddy. The feathers stuck everywhere—on the food, in the glasses, sticking on hair and clothes, and tickling noses, and causing universal consternation.



LONG-TAILED TIT AND EGG.

“Here’s a pretty kettle of fish!” said Jimmy, looking up in dismay. “How could you, Frank?”

But Frank had vanished out of the window laughing incontinently, and Dick and Jimmy were left alone to bear the storm of expostulations and reproaches with which they were favoured by the company, who thought the whole affair was premeditated.

CHAPTER XII.

Yarmouth.—The “Rows”.—A Stiff Breeze.—An Exciting Sail.—Sparrowhawk’s Nest.—A Nasty Fall.—Long-eared Owl.—Partridge.—Sandpiper.

YARMOUTH is a queer old semi-Dutch town, and is often compared in shape to a gridiron, the bars of that article corresponding to the “Rows” which are such a peculiar feature of Yarmouth. These rows stretching across from the quay-side to the principal street are very narrow, yet contain the houses and shops of a great portion of the population. Many are only wide enough for foot passengers but along others, carts of a peculiar construction can pass. These carts are very long and narrow, and have only two wheels, and a stranger seeing them for the first time would wonder what they were for.

Below Breydon Water the river narrows very much, and flows past numerous fish-wharves and quays to the sea. The tide rises up this narrow neck with great force, and were it not for the safety-valve which is afforded by the vast expanse of Breydon Water, where the tide can expand and waste its force, it would rush on and flood the low-lying marshes for miles up the river.

The boys had resolved to start on their voyage up Breydon Water at ten o’clock in the morning, when the tide would be making and would help them on their way, but when they had staggered down to their boat in the teeth of a fierce north-wester, and saw Breydon white with foam, torn off short snappy waves caused by the meeting of wind and tide, they were rather dismayed, and held a council of war as to what should be done. Not a sail could be seen on the wide expanse of Breydon Water. The sky was of a hard and pitiless blue, and clearly foretold a continuance of the gale.

“Shall we venture or not?” said Frank.

“What do you feel inclined to do yourself?” asked Jimmy.

"Well, I don't think there is any great risk. We will take every reef in, and the tide will be in our favour. It will be a good trial for the yacht too. If we can get to the top of Breydon against this gale we shall have every reason to be satisfied with her. I am game to try."

"So am I," said Jimmy.

"Then if you are, I am," said Dick.

"That's right. Then do you make all snug on board, while I run back to the town. I have something to buy," and off he went.

In a short time he returned with a small life-belt in his hand.

"Here, this is for you, Dick. Jimmy and I swim so well that there is no danger for us, but you cannot swim so very far yet, so you had better wear this in case of a capsized, though I don't expect one. Now, are you ready?"

"Yes."

"Then, Jimmy, do you take the main-sheet, and you, Dick, take the mizen-sheet, and I will cast off."

The sails were hoisted, and everything made taut and trim. Frank undid the moorings, and jumped on board, seizing the tiller just as the yacht's head turned from the shore, and she heeled over before the wind. No sooner was she free from the quay than she seemed to be at the opposite side of the river, at such a pace did the wind impel her. Although her raft-like frame gave her so much stability, yet she heeled over until her deck to leeward was in the water. She came back on the opposite tack with the speed of a racehorse. Frank said,—

"I say, she fairly seems to run away from us. Quick, loose the sheet, Jimmy! Here's a squall!" and the yacht ran up into the wind, and her sails fluttered as Frank kept her so until the gust had passed. They were soon out in the open water of Breydon, and were able to take longer tacks. This gave them some ease, but they found that the Swan was not a "dry" boat. Her lowness and flat shape caused her to "ship" the short curling seas. They, of course, passed over her deck harmlessly, but nevertheless they made her wet and uncomfortable. As long, however, as she was safe and sailed well, the boys did not mind this at all, and they stuck to their work bravely, handling their yacht with great skill and courage.

Large portions of Breydon are dry at low tide, and are there called "muds," or "flats." On these muds flocks of sea-fowl congregate.

"These are capital places in the winter for wild-fowl shooting," said Frank, "we must have a day's sport here in the next hard frost. Bell will come with us, and show us some good fun, I am sure."

"My father has a big swivel duck-gun somewhere about. If that will be of any use I will look it up," said Dick.

"Of course it will be of use, old man. Just the thing we want. Haul in her sheet, Jimmy. We can sail a point nearer to the wind, if we choose. I say, this is fine! What muffs we were to think that there was any danger, or that the yacht could not do it. See how well she behaves! But there, I am putting her too full, and she was very nearly capsized. The man at the wheel must not speak, so don't talk to me."

"This may be fine fun for you, Frank, but my hands have nearly all the skin taken off them by the rope. It is jolly hard work holding on to this, I can tell you," said Jimmy, who, indeed, had got his work cut out for him.

"Same here," said Dick; "I don't care how soon it is over, for my hands are awfully flayed. I wish we could make the sheet fast."

"Ah, you must not do that, or we shall be upset at the next gust," said Frank.

After an hour and a half of very exciting sailing, they had sailed the five miles of Breydon Water, and ran into the smoother current of the Waveney. Here, also, they got the wind more aslant, and skimmed along at a great pace with very little labour. In this way, they sailed some fifteen miles, and at length came to anchor in a sheltered spot under a wood-crowned bank not far from Beccles. After making all snug and eating their dinner, the most natural thing to do was to explore the wood near them. They left the yacht, and crossing a meadow they entered the wood. It was a thick fir-plantation and promised well for nests.

"What is that one?" said Jimmy, pointing to a nest in a tall fir-tree, "is it a crow's, or an old wood-pigeon's, or a hawk's? Who will go up and see?"

"I will," said Frank, and up he went hand over hand among the thick boughs. As he neared the top, he was obliged to

proceed more cautiously, for the branches were thin, and the tree swayed in the wind. All doubts as to the kind of nest were speedily dissolved, for with a cry of rage, a sparrow-hawk came dashing up, and flew in circles around the tree, screaming angrily, and making fierce attacks at the invader of its home. Frank, nothing daunted, continued his upward way, and soon was able to see into the nest.

"There are four young ones," he cried.



SPARROW-HAWK.

"What a pity," said Jimmy. "If they had only been eggs! Look sharp and come down, Frank, you are swinging about so much that it does not seem safe up there."

But Frank answered nothing, and remained on his perch.

"What is the matter, Frank?"

"I am thinking about something."

"A tree-top is a funny place to think. Here is the other hawk coming to pay you a visit, and it is the female. She will be more savage than the other, and may attack you."

"No fear," said Frank, but at that moment both hawks made

a sudden onslaught upon him, and the female struck him so savagely, that she tore a big gash in his cheek. He was so startled at this unexpected and hostile measure that he lost his hold and fell. When Dick and Jimmy saw their leader crashing through the branches, and turning over and over as he fell, they could not repress a shriek, and closed their eyes to shut out the horrible accident that must happen. They waited in fearful suspense for the expected thud, but not hearing it, they ventured to look up again, and saw Frank lying on a thickly spreading branch not far below the nest. He was lying quite still, but clutching hold of the boughs with his hands. Both Dick and Jimmy flew to the tree, and commenced to climb it. With a speed that seemed wonderful to them afterwards they reached Frank.

“Are you hurt, old man?”

“Not at all, only all the wind is knocked out of me. I shall be all right in a minute. I say, if my mater saw that tumble, she would not let me go out alone any more, would she? That hawk was a plucky bird. I am going up to the nest again.”

“What for? I should think you have had enough of hawks’ nests for a long time.”

“Yes, but I want to take two of the young ones. Two of them are much larger than the others, so they must be females. Now I’ll tell you what struck me before the bird knocked me off my perch. Suppose we take these young hawks, and train them up in the way they should go—that is, let us use them for hawking.”

“It is a good idea and no mistake—but can we do that?”

“Easily,” answered Frank, gathering himself together, and resuming his ascent.

“What a cool fellow he is,” said Dick to Jimmy. “He does not seem to know what danger is.”

“He does not choose to show it, if he does. But let us go up and help him with the hawks.”

The young hawks were fully fledged and nearly ready to fly. They were fierce enough now, but Frank said he would undertake to tame them, and fit them for hawking before the winter, if the other boys would help him. The idea of reviving that famous old sport was a very fascinating one, and they determined to do their best to carry it out, with what result will afterwards be seen. In the meantime it was a difficult matter

to dispose of the birds. They tied strings to their legs, and kept them in the cabin, feeding them, and taking as much care of them as if they were babies, until they came to Norwich, when they sent them to Bell, who took care of them until their return.

After taking the hawks to the boat, the boys went back to the wood and separated, so that they might cover more ground. Suddenly peals of laughter were heard coming from the corner of the wood. Frank, pushing aside the branches to get a clearer view, was surprised to see Dick staring at a thick Scotch fir, holding his sides, and laughing until the tears ran down his cheeks. Frank hastened up to him to see where the fun was. Dick could only point, for he was too far gone for speech. Frank looked in the direction he pointed, and immediately burst into a fit of laughter far more uproarious than Dick's. Jimmy, running up as fast as he could, saw both his friends laughing and capering like mad.

"What on earth is the matter? Have you both gone crazy?" They pointed to the Scotch fir. Jimmy looked, and immediately fell a roaring with laughter as hard as the others.



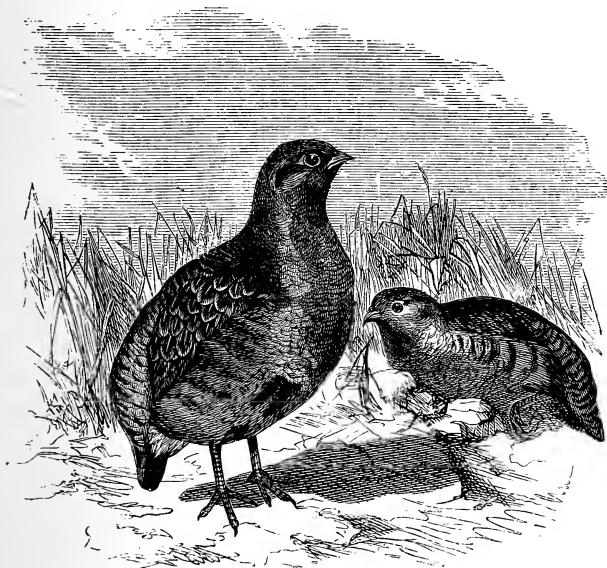
LONG-EARED OWL.

This is the explanation. On a horizontal bough of the tree were seated six young long-eared owls. They were fully fledged, but unable to fly, and according to their custom they had left their nest and were perched together on this branch waiting for their parents to feed them. They looked most extremely absurd and ridiculous as they sat, each on one foot swaying to and fro after their manner on the bough, and gravely winking their large brown eyes at the intruders. It is impossible to give any idea of the comicality of the scene any more than it is possible to give a true description in words of the grotesque gestures of a clown. Of this owl Morris says,—

"It is readily tamed, and affords much amusement by the many grotesque attitudes it assumes, to which its ears and eyes give piquancy. It may often be detected that a small orifice is

left through which it is peeping when its eyes would seem to be shut, and it has the singular faculty of being able to close one eye while the other is not shut, so that it may appear wide awake on one side while apparently asleep on the other, or if asleep, may be so literally with one eye open. The ears are raised by excitement ; at other times they are depressed."

On its head this owl has two tufts of feathers which look like donkey's ears, and give it its name. It is common in many



COMMON PARTRIDGE.

parts of England, and frequents thick fir-woods, where it builds in old nests of crows and hawks, or even squirrels, which it lines with wool, and in which it lays two or three round white eggs.

Jimmy sadly wanted to take one of the young ones home, but the hawks were as much as they could manage in the yacht, and after all, the owl would be of no use to them, and it might

die, so they reluctantly left the birds on their perch to snore in peace.

“What is that partridge calling for?” said Frank.



EGG OF COMMON
PARTRIDGE.

“I can’t think,” answered Jimmy. “It seems to come from the top of that haystack, but that is a very unlikely place for a partridge in the breeding season.”

“I will go up and see,” said Dick, “if you will give me a back.” They soon lifted him up, and as they did so, a French or red-legged partridge flew off.

“Here is her nest with ten eggs in it,” cried Dick, “what an extraordinary spot for a nest.” And so it was, but not altogether singular, for the partridge has been known to build in a hollow tree, and in other unlikely situations.

Leaving the wood, they proceeded up a small stream which empties itself into the Waveney. As they advanced, a sandpiper took short flights in front of them. It was presently joined by another, and the two seemed so uneasy, that the boys concluded that their nest could not be far off. They therefore set to work to examine every likely spot with great care. Dick was the one who found it, in fact he very nearly trod upon it. Four cream-coloured eggs with brown spots, very much pointed and very large for the size of the bird, lay in a hollow in a gravelly bank, upon a few pieces of dry grass and leaves, the birds’ apology for a nest. The sandpipers flew over head, uttering their cry of “weet, weet, weet,” with great anxiety, and they looked so pretty, that the boys felt sorry for them, and only took two of their eggs.

The summer snipe, as this bird is also called, is well known to everyone who wanders by the side of streams or lakes. Its white stomach contrasts so prettily with its dusky back, and it walks so merrily about the water-edge, trotting over the lily leaves, and taking short flights before the angler, that it is one of my favourite birds, the kingfisher and the water-ouzel being the other two.

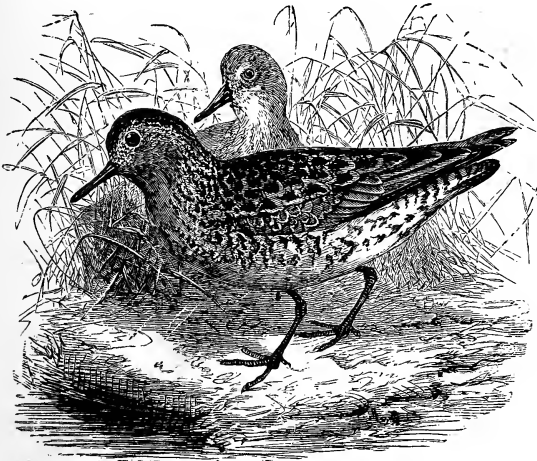
Jimmy had gone off up a small ravine thickly covered with underwood, in search of a fern or two which he expected to find there. He had not been gone long before they heard him

give a loud shout, and turning towards the spot, they saw a woodcock float out of a covert with that owl-like flight which it sometimes affect.

"Here is its nest," shouted Jimmy.

This news was sufficient to make the boys rush at once to the place where Jimmy stood.

"On the ground under a holly-bush was the nest, with four eggs in it, of a dirty yellowish white, spotted with pale brown.



COMMON SANDPIPER.

"Well," said Frank, "I think we have had an uncommonly good day."

"So do I," replied Jimmy, "and I feel uncommonly hungry. Don't you?"

"It seems to me that we do nothing but eat," observed Dick.

"I should like to go to bed soon. I am tired, and my ribs ache from my tumble," said Frank.

CHAPTER XIII.

A Grizzly Bear.—Gossamers.—Strike only on the Box.

AFTER Frank's cuts and bruises were plastered up, the boys turned into their berths and were soon fast asleep. Now the hawks had been placed in a corner at the foot of Jimmy's berth, and crouched together quiet and sullen. The foot of Jimmy's bed was only about six inches from them, and as he turned and twisted in his sleep, he pushed his foot out of the bottom of the bed, exposing his toes within tempting reach of the young hawks' talons. The natural consequence followed: One of the birds seeing this capital chance of avenging himself on his enemies, seized fast hold of Jimmy's big toe with his sharp beak. Jimmy jumped up with a loud yell, and hitting his forehead against the roof of the cabin fell down again on the floor. Frank, hearing a noise, started up not more than half awake, and fell out of his hammock on to the top of Jimmy, whom he seized by the throat. Dick awoke from a dream of Arctic exploration, and cried out,—

“Is that a grizzly bear?”

“Grizzly bear!” said Jimmy, whom Frank had released. “Something ten times worse than a bear has seized my toe and bitten it off, or nearly so, and then I hit my head against the roof, and Frank half choked me. I think it is a great deal too bad.”

“You must have been dreaming, Jimmy,” said Frank; “there is nothing here that could bite your toe.”

“But I can feel that it is bleeding!” answered Jimmy, in a very injured tone of voice.

At that moment a noise in the corner of his berth attracted their attention.

“Oh, it must have been the hawks!” said Dick, and he and Frank went off into fits of laughter, which only grew more boisterous as Jimmy proceeded to light a candle, and bind his

toe up with a piece of sticking-plaster, grumbling all the time, and casting savage glances at the offending birds.

The light was put out, and they once more went to bed, Jimmy taking care to tuck his feet well under him. Every now and then a smothered burst of laughter from the other berths told him that his friends were still enjoying the joke, and then, as his toe began to pain him less, his sense of the ludicrous overcame his sense of outraged dignity, and just as Dick and Frank were dropping off to sleep, they were again startled by a peal of laughter from Jimmy.

"Oh dear!" said Frank, "you will be the death of us, Jimmy. Have you only now discovered the joke?"

"Oh, don't make me laugh any more. My sides are aching so," said Dick.

Once more composed, they went to sleep, and awoke early in the morning to find that the gale had spent itself, and that a soft air from the south blew warmly over the land. The sun shone his brightest, and the birds sang their merriest. They had a bathe in the clear river water, and dressed leisurely on the top of their cabin, while the sun, which had not risen very long, threw their shadows, gigantic in size, over the green meadows, which were covered with silvery gossamers—and then they were witnesses of a curious phenomenon. Their shadows had halos of light around them, extending about eighteen inches from each figure, all around it. The strong light from behind them, shining on the wet and gleaming gossamers, was no doubt the cause of this singular appearance. The same sight has been seen when the grass was wet with dew.

"The fields are quite silvery with the gossamer," said Dick. "Is it not pretty!"

"Yes, what a number of spiders there must be to cause such an appearance," answered Frank. "It always puzzles me how those spiders move about—and how is it that on some mornings they appear in such immense quantities, while on the next morning, perhaps, not one will be seen?"

"I think they are always there," replied Dick, "but they are only visible when the dew is falling heavily, and wetting them so that they become visible. In the clear air, too, the sun will dry them so that we shall not be able to see them; but they will be there all the same. Let us gather a bunch of rushes with a lot of them on and examine them."

He did so, and they saw great numbers of tiny spiders gliding about their tiny webs. By and by, as they watched them, the little spiders shot out long silvery threads, which floated out to leeward, and then the spiders let go their hold and launched themselves into the air, and were borne away by the faint south wind.

"Oh, so that is the secret of their wandering, is it? Don't you wish you could send a long floating thread from your stomach, Jimmy, and sail away over the marshes? It would be as good as having wings."

"Don't be so absurd, Frank."

A wherry was being pushed up the stream by its two stalwart boatmen, by the process known in Norfolk as quanting. The men placed their long poles or quants into the river at the bow of the wherry, and, placing their shoulders against them, walked to the stern, propelling the boat along with their feet. By this laborious method, when the wind fails them, do the wherry-men work their craft to their destination. As they passed the yacht, one of them cried out—

"We have got no matches, guv'nor. Can you give us some?"

"Certainly," replied Frank; and diving into the cabin, he returned with a handful. These he handed to the wherryman, who thanked him and passed on. The man stopped quanting and tried to strike a match by rubbing it on the sole of his shoe. It failed to ignite, and he threw it down. Another met with the same fate, and another also. Then he tried striking them on wood, then on iron, then on his rough jacket, but all to no purpose, and they could see him trying one after another, and throwing them down with every symptom of disgust.

"Why, Frank, those matches strike only on the box," said Dick.

"I know that," replied Frank, laughing quietly.

"Oh, that's too bad. Fancy the fellow's disgust!"

They sailed up to the pretty little town of Beccles, where they took in provisions, and Frank bought some more sticking-plaster in case of any further accident. They then had a good dinner at the principal inn, and afterwards called upon a friend, who took them over the large printing-works near the town, where many books published in London are printed. They

began with the compositors' room, where, with marvellous rapidity, the workmen were selecting the letters from their respective boxes in the case of type, and arranging them in their proper order. The extraordinary illegibility of some of the MSS. from which the compositors were reading with apparent ease astonished our boys, who could make nothing of them. They then paid a visit to the reader, who has the wearisome and eye-tiring task of reading over and correcting the proofs. When the proofs have been corrected and the "revise" submitted to the author, and his corrections made, the process of stereotyping comes in. The sheet of type is covered with a layer of plaster-of-paris, which takes a perfect impression of the words on the sheet of type. From this plaster-of-paris cast another cast is taken in metal, and this forms the stereotype plate from which the book is printed. The type, which is very valuable, can then be distributed to its proper places, and used again. The stereotype plates are always kept stored in stacks, like bottles in a wine-bin.

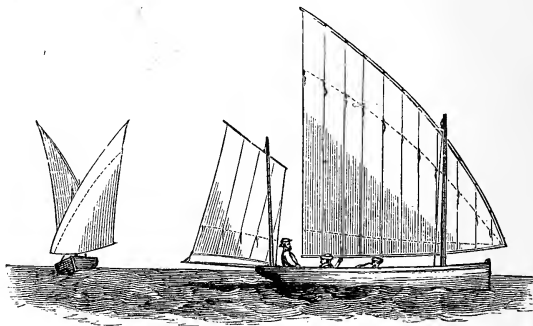
Jimmy, being of a mechanical turn of mind, was very much interested in the stereotyping process, and more particularly in the account they received of the way in which many daily papers are printed. The impression is in the first instance taken by means of a soft wet paper of sufficient thickness. This is dried, and the molten metal is poured upon it, and takes a perfect impression, without in any way spoiling the paper mould, or "matrix," which can be used again, while a plaster one cannot. Jimmy asked to be shown some wooden blocks from which wood engravings are printed, and the boys examined them curiously.

They received an invitation to spend the evening at their friend's house, and after returning to the boat to feed the hawks with some "lights" bought at a butcher's shop, they had a very pleasant evening, and slept that night on shore.

CHAPTER XIV.

Oulton Broad.—Lateeners.—Lowestoft.—Ringed-Plover's Nest.—Oyster-catcher.—Shore Fishing.—A Perilous Sail.

THEY sailed quietly down the river again, and excited much attention from the many yachts they met. They turned off along Oulton Dyke, and on to Oulton Broad. The lake was full of craft of all rigs and sizes. There had been a regatta there the day before, and the major part of the yachts still remained. There was a stately schooner, moving with dignity; a smart cutter, heeling well over, but



LATEEN SAIL.

dashing along at a great pace; a heavy lugger; and, most graceful of all, the lateeners. These are a class of boats peculiar to the Norfolk waters and to the Mediterranean. The shape of them will be familiar to all who have ever looked at a picture of the Bay of Naples. They carry immense yards, the yard of a boat thirty feet long being about sixty feet in length. Such a yard, of course, carries a very large sail. In addition to this large sail they have a fore and aft mizen astern. They

sail wonderfully close to the wind, but in running before it they sometimes take it into their heads to duck under, because the weight of the sail is all thrown on the fore-part of the boat, and sometimes proves too much for it.

A boat which attracted our boys' attention was a lugger, with her sails crossed by strips of bamboo, so that they looked something like Venetian blinds. These made the sails stand very flat and firm, and the boat so rigged seemed to sail very fast. The sun-lit waters of the broad, covered as they were with rapidly-moving yachts, whose white sails contrasted with the blue water and sky and the green fringe of tall reeds which encircled the lake, presented a very pretty spectacle, and one that called forth the admiration of our young yachtsmen. As they threaded their way through the numerous vessels, they saw that they themselves were an object of curiosity, and as sound travels far on the water, and people seldom think of that when they speak on it, the boys overheard many comments upon themselves. Those upon their boat were sometimes not flattering, but those upon their skill in handling her upon that crowded water were very appreciative, and at length Frank said, with something like a blush—

“Look here, this is getting too warm. I vote we moor her, and go to Lowestoft to have a nip in the sea.”

The others agreed to this, and having moored the yacht in a safe place, they took their departure. At the lower end of Oulton Broad is a lock, by which vessels can be raised or lowered, as the case may be, to, or from Lake Lothing, a tidal piece of water, communicating with the sea through Lowestoft harbour. A brigantine collier was in the lock when our boys came up, and they stood and watched it come through, going out upon a floating raft of wood, so as to see it better entering the broad.

“Why, look at her bows. They are carved all over like an old-fashioned mantel-piece.”

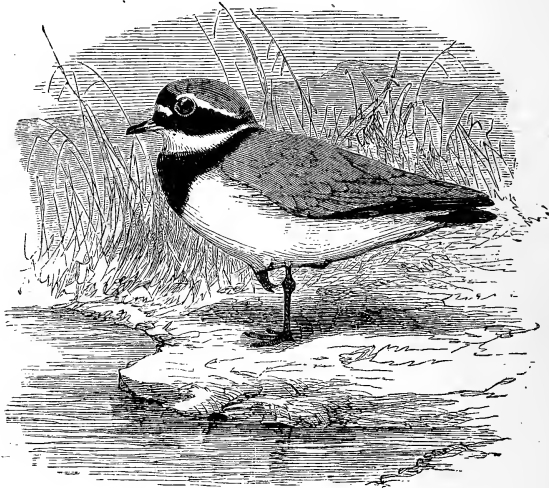
As it came through the lock, it knocked against their raft, and threatened their safety, so seizing hold of the chains that hung over its bows, they climbed on board and entered into a conversation with her skipper. He told them that his ship was 100 years old, and he considered her still stronger than many a ship of more recent build. He had on board some beautiful little dogs of the Spanish breed, pure white and curly-haired,

with sharp noses, and bright black eyes. Dick insisted on buying one.

“We cannot have it on board with the hawks,” said Frank.

“But I shall send it home by the carrier from Lowestoft,” answered Dick.

They walked along the shores of Lake Lothing to Lowestoft, and went and had a bath. Then they walked along the cliffs towards Pakefield, and while crossing a sandy spot Dick discovered a ringed plover’s nest. There were three eggs, cream-coloured, and blotched with brown. They were simply laid in a



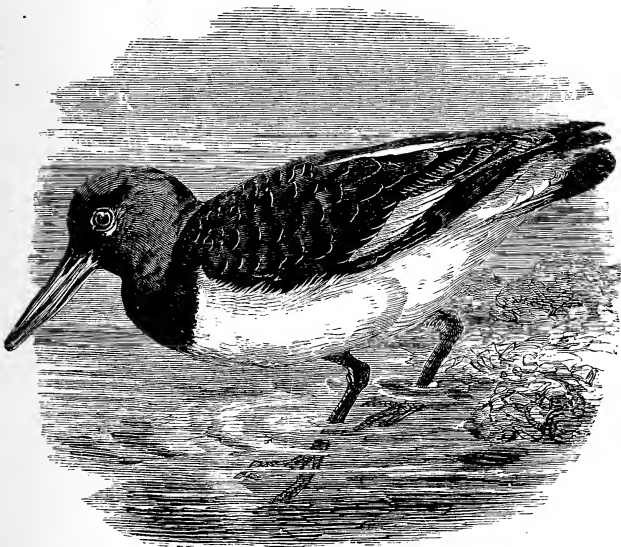
RINGED-PLOVER.

hole in the sand. They saw the old birds running along the shore before the wind, as is their habit, and looking very pretty with their grey beaks, and white stomachs, and black collars. On the shore they also saw some oyster catchers, with their plumage nearly all black, except a white belt, and white bars on their wings; and also a pair of redshanks, with their long red legs and bills, and French grey plumage; but although their nests are common enough in Suffolk (in which county our boys now were), they failed to find their eggs. The redshanks nest on the ground in marshy places, and lay eggs of a great

family likeness to those of other birds which lay in similar positions.

On the shore men and boys were fishing in the following manner :—

They had long lines with a number of hooks on at regular intervals, which were baited with mussels. One end of the line was pegged into the sand ; the other was heavily weighted with lead. They had a throwing-stick with a slit at one end. Into this slit the line next the weight was introduced. With the aid of the stick the line was thrown out a considerable distance.



OYSTER-CATCHER.

After being allowed to rest some time it was hauled in, and the fish taken off. In this way they caught flat-fish and small codlings, and some of them had accumulated a large heap of fish.

Two boatmen came up to the boys, and asked them if they would like a sail. "We'll take you for an hour for sixpence each."

"Well, it's reasonable enough," said Frank; "I vote we go." So they stepped on board and were soon tacking merrily about, a mile or two from land.

"Did you ever see two uglier fellows than our boatmen?" said Dick in a whisper to Frank.

"No—but what are they staring at that steamer so hard for?" A large yacht was making direct for Lowestoft harbour.

"I say," said Frank "is not that steamer standing too close in shore? There is a bank of sand somewhere about there. I remember seeing remains of a wreck there not long ago."

"Hush! hold your tongue," answered the steersman.

"What do you mean, sir? If she goes on in that course she'll strike."

The man looked savagely at him, and replied,

"Look here, young man, if she strikes there will be no harm done. The sea is too smooth, and we shall be the first on the spot to help them off, and we shall get a good long sum of money for salvage. If you hold your tongue and say nothing you shall go shares. If you don't, I'll crack your head for you, so mind you don't give her any signal."

"You unfeeling fellow!" said Frank. "Shout, Jimmy and Dick, with all your might. I will settle this blackguard."

Jimmy and Dick obeyed and waved their hats to the advancing yacht. The man at the helm could not let go the tiller, but his mate made the sheet fast, and rose to strike Frank. Frank seized the stretcher from the bottom of the boat and raised it in the air.

"Touch me, if you dare!" he said.

The brute struck at him, enraged at the prospect of losing so large a sum of money as his share of the salvage would amount to. Frank avoided the blow, and with all the strength of his lithe young body, brought the stretcher down on the fellow's skull. He dropped to the bottom of the boat, and lay there as still as a log.

"Now we are three to one," he said to the steersman, "so you must do as we tell you."

The man was a coward at heart, though a bully by nature, so he dared make no objection.

Meanwhile the yacht sheered off, but not soon enough to avoid just touching the end of the shoal, and getting a bump, which threw the people on her deck down, and gave

them a fright. They passed on without so much as shouting "thank you."

They now steered for the shore, Frank retaining the stretcher in his hand, in case of an attack. The man whom he had stunned soon came to himself, and growled and swore horribly, but dared not do more. When they landed Frank said, "Now you are a pair of blackguards, and I shall not pay you anything;" and followed by his companions he turned away. Before he had gone many steps, however, he turned back and said, while he pitched them half-a-crown: "There, that's for plaster!"

CHAPTER XV.

Animals which never die.—A Wonderful Tip to his Tail.—Thunderstorm.
—Swan's Nest.—Bearded Tit.—Reed-wrens and Cuckoo.

THE next day they sailed down the Waveney, until they came to Haddiscoe, and then, instead of continuing down to Breydon Water, they went along the New Cut, a wide channel which unites the Waveney with the Yare, joining the latter at Reedham. They found the channel of the Yare very much broader than the Bure or the Waveney; and as they had a favourable breeze for the greater part of the way, and there was plenty of room to tack in the reaches where it was against them, they made rapid progress.

As they sailed quietly along, Dick lay on the roof of the cabin reading a number of *Science Gossip* which they had bought at Lowestoft. Presently he cried out,—

"Do you know that there are animals which never die?"

The others laughed at the idea, but Dick proceeded to read out as follows:—

"Will the reader be astonished to hear that there are exceptions to the universal law of death, that there are animals, or at any rate portions of animals, which are practically immortal. Such, however, is really the case. I allude to a species of the

genera Nais and Syllis, marine worms of no special interest to the ordinary observer, but those who have watched their habits closely, tell us of the almost extraordinary power of spontaneous division which they enjoy. Self-division, as a means of propagation, is common enough among the lower members of both animal and vegetable kingdoms, but the particular kind to which I refer now, is, I believe, peculiar to these singular worms. At certain periods the posterior portion of the body begins to alter its shape materially, it swells and grows larger, and the transverse segments become more strongly marked. At the last joint, at the point where it joins the first segment of the body, a true head is formed, furnished with antennæ, jaws, and whatever else goes to make a marine worm "perfect after its kind," and forthwith the whole drops off, a complete animal, capable of maintaining a separate existence. Whether the process goes on for ever—that is to say, throughout all generations—of course, no one can tell; but if it does—and there is no reason to suppose the contrary—then it is self-evident that the posterior portion of one of these worms is, as I observed before, practically never dying. It is simply fitted every now and then with a new head! In fact, the tail of the first Syllis ever formed, provided it has had the good luck to escape external accident must still be in existence—a truly venerable animal, and without controversy the 'oldest inhabitant' of the seas."

"It strikes me," said Frank, "that that animal would be something like the Irishman's stocking, which he had worn for a score of years. It had been re-footed and re-legged several times, yet he always asserted that it was the original stocking, although there was not a particle of the old stuff in it."

"What a wonderful tip to his tail some animal has got then, if that is true," said Jimmy.

I cannot say whether the statement of the writer in *Science Gossip* is strictly accurate, for who can decide when doctors disagree; but it seems plain enough that the process of generation by sub-division is far nearer the longed-for perpetual life, than anybody has been able to get to the coveted solution of the problem of perpetual motion.

"Do you know that the water we are sailing on is higher than the marshes around us?" said Frank.

"Yes, and all those windmills are to pump the water up from

the drains. They look very funny twirling away all by themselves."

Early in the day they reached a public-house surrounded by a little grove of trees, which gave an agreeable variety to the landscape. This was Coldham Hall, and as the sky was clouding over and the wind sighing fitfully through the reeds and the trees, and there was every symptom of a violent storm, the boys decided to remain there until the morrow, and then sail up to Norwich.

During the afternoon they amused themselves by fishing for eels, which were biting very freely. The heavens grew black, and the thunder muttered at intervals, but the storm held off until the evening, and then as it was getting dark it came on most violently. The rain came down in torrents. The lightning lit up the marsh for miles most vividly, and each flash was succeeded by an intenser blackness, while the bellowing of the thunder made the very earth shake. The boys stood at the door of the inn, gazing at the storm and awe-struck by its mighty power.

"I don't like the idea of sleeping on the river to-night," said Jimmy. "The landlord has a bedroom vacant, and I vote we sleep here instead of going on board."

The others willingly consented, and Dick and Jimmy had a double-bedded room between them, while Frank slept in a small attic. As the night wore on the storm passed away, but its mutterings could still be heard. Jimmy did not like thunder, and felt very nervous while it was about, as many otherwise brave people will. He could not for the life of him go to sleep, and lay tossing about in a most uncomfortable state for half the night, while Dick was slumbering peacefully. Jimmy could stand it no longer, and got out of bed with the intention of arousing Dick, and getting him to talk to him. He stole across the room, and by the faint starlight which came from the sky, which had partially cleared after the storm, he saw that Dick had kicked all the bed-clothes off, and lay very deep in slumber. He touched him lightly on the foot to awake him gently. To his amazement Dick lifted his leg and began to wave it slowly backwards in the air, at the same time whistling softly. Jimmy was so struck with the oddity of this procedure in a sleeping man that he burst into a peal of laughter. Even this did not wake Dick; and Jimmy, having now something to occupy his mind, went

back to bed and laughed himself to sleep. When he detailed the incident to the others in the morning they would not believe him, but said that he must have been dreaming.

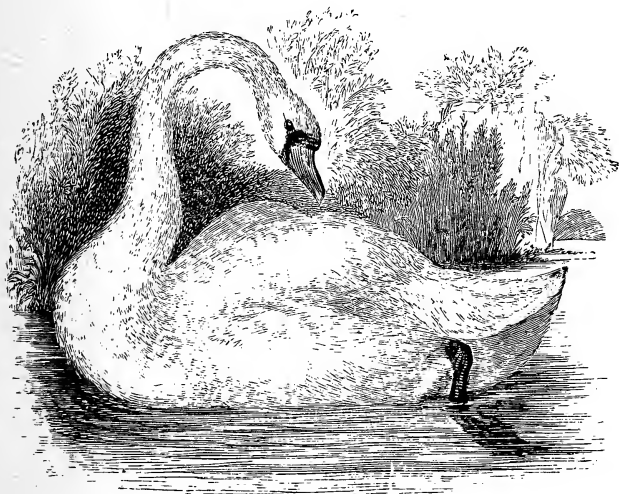
The morning broke sunny and with a wonderful freshness in the air, which put the boys into the highest spirits. They



SWAN'S NEST.

sailed a little way up the river to Surlingham Broad, which they wished to explore. They sailed past the main entrance to the broad, thinking there was a wider passage further on. Finding they were mistaken, they attempted to take the punt through a

narrow and sinuous dyke which appeared to lead into the broad. They pushed their way along this for some distance until it became so narrow and shallow that they could scarcely get on. Just then they came round a corner of reeds, and to their dismay found that they had come suddenly upon a swan's nest. The female swan was sitting upon a huge pile of sticks placed on a small reedy island. Round this island the male swan was swimming in a very stately fashion, and when he saw the boys coming so near his beloved, he swam towards them,



SWAN.

with his wings and tail raised and set out in a way that unmistakably told them he meant war. They hastily pushed back, but the punt stuck in the mud, and Frank had to take an oar and keep the swan at bay with it, while the others pushed the punt off and back again.

"Pray, look sharp," said Frank, "I cannot keep him at bay much longer without my hurting him or his hurting me."

"We're doing our best," said Jimmy, and missing his footing as he spoke he fell into the mud and water.

"That's no help," said Frank, giving the swan a sharp poke with the oar. Jimmy scrambled into the boat, and the swan, satisfied that they were in full retreat, gave up the pursuit.

They went back to the yacht, where Jimmy changed his clothes, and then went on to the broad by the proper channel.

Their object in visiting this broad was to find the nest of the bearded tit, which Bell had told them bred there in great numbers. This beautiful little bird is now becoming very rare. Its home is among the reed-beds of Norfolk and Suffolk, but it has been so shot down wholesale by bird-stuffers, and its eggs collected for sale, that it has become exceedingly rare. It is a very pretty bird, having a long tail, fawn-coloured back, and white belly, but its distinguishing feature is that it has a pair of moustaches in the shape of black tufts of feathers depending from either side of its mouth. Very properly, too, it is only the males which have this appearance. In Norfolk it is called the reed pheasant. It is very interesting to see a flock of them flitting about the reeds. Like all the tit family, they are very lively, jerking up and down the reed-stems in all sorts of positions, and as often as not with their heads down and their tails up.

Apart from the open water of the broad, there were numerous channels among the reeds which latter rose to the height of seven or eight feet above the water. Along these channels the boys made their way, listening attentively to the chirping of the birds, which they could hear but not see. By keeping very still they could at length distinguish two or three of the birds they sought, flitting about the reeds, and by the aid of their glass they could perceive the birds with great distinctness. The movements of one bird led them to its nest, and pushing their way with some difficulty they were fortunate enough to find it. It was built of dry stems of grass and sedges, and was placed about a foot from the ground (or water, for it was a compound of both), in the midst of a thick clump of reeds. It contained five eggs as large as those of a great tit, pinkish-white in colour, spotted and streaked with reddish brown, something like those of a yellow-hammer. While they were debating how many of the eggs they should take, Frank saw a tit fly from a tuft of reeds a few yards off, and on going there they found another nest with four eggs in it. This was

lucky, for it enabled them to take two eggs from each nest without feeling any compunction.

They found several of the beautiful purse-like nests of the reed wrens attached midway up the tall reed-stems. In one of them there was a young cuckoo, the sole occupant of the nest. What had become of the little reed-wrens was plainly to be seen by the bodies which strewed the ground beneath. The poor little fledglings had been ousted from their home by the broad-backed cuckoo. I suppose we ought not to call



CUCKOO AND EGG.

him cruel, because it is the instinct of self-preservation which makes him behave so badly. If the young birds, the legitimate owners of the nest, had been allowed to remain, the old birds could not have fed them all, and the young cuckoo must have starved. The boys watched the nest for some time to see the old birds feed it, and they were greatly delighted to see the way in which the reed-wrens managed it. *They perched on the young cuckoo's back while they placed the food in*

its broad mouth. It was the only standing room there was, for the cuckoo more than covered the whole of the nest.

"Who wouldn't be a naturalist!" said Frank, "when he can see such things as that?"

Dick replied, "I did not know that life could possibly be so jolly, until I learnt something of natural history. I do wonder that so few fellows take to it. I suppose it is because books make it appear so dry. Books don't seem to me to go into the *sport* of the thing. They only show you the surface of it, and not the life. I will try to write a book some day when—" and he hesitated.

"When you get more conceited, eh, Dick?" said Frank laughingly.

Then they sailed up to Bramerton, and when they brought up at the Wood's-end public-house they found a number of old school-fellows there, and the racing four-oar belonging to the school club.

CHAPTER XVI.

Old School-fellows.—Tom-tit's Nest in Boot.—Nuthatch.—Wryneck.—
Ant-hill.—Marsh-Tit.—A Comical Fix.

As the *Swan* was brought up to her moorings at the Staithe the boys who were assembled on the green before the front of the house rushed down to inspect the strange boat and then to claim acquaintanceship with Frank and Jimmy. They were their old school-fellows, and were glad to see their old companions again. They swarmed over the yacht, criticising her, and asking questions about her and the cruise of the boys.

Marston, a great big fellow, dived into the cabin exclaiming, "What a jolly little box!" and sat down on a berth to see how it felt. No sooner, however, had he sat down than he jumped up and out on deck, as quickly as a Jack in a box

does when the spring is touched, at the same time uttering a howl of pain.

"What is the matter?" said Frank.

"I do not know," answered Marston, poking his head into the cabin again to see what was there, while he rubbed his back disconsolately. The fact of the matter was that he had sat down in the corner where the hawks were, and they, seeing an inviting bit of bare flesh between the waistband of his breeches and his jersey, had saluted him with a *one, two*, of very remarkable poignancy.

Jimmy's delight at this incident was unbounded. He felt now that he was amply repaid for the damage to his own big toe. When the general laugh at this incident had subsided, Marston said:—

"I say, Frank, we are going to row a race with the Norwich Rowing Club. A four-oared race; it comes off the day after to-morrow; and most unfortunately our No. 3 has sprained his wrist and cannot row, and we did not know what to do. We have no other man big enough to take his place who is in condition. We were discussing the matter as you came up. Now, you are a good rower; will you row for us?"

Frank was pleased at the invitation, especially as it was backed up by the others most cordially; but he said—

"I have not rowed for so long a time that I am quite out of condition."

"Oh, nonsense, you look in perfect condition. If you have been out for a week's yachting you must be in capital condition. Do row, or we shall lose the race to a certainty."

"You had better row, Frank," said both Jim and Dick together, but he still hesitated.

"Come, Dick," said Jim, "let us go and birds'-nest in the wood while Frank listens to the voice of the charmer."

So off they went, leaving Frank and the others to settle the question between them.

Behind the inn there rose a steep wood-crowned bank, and it was to this that the two boys directed their steps. On their way they passed a skittle-alley, and Dick said to the man in charge—

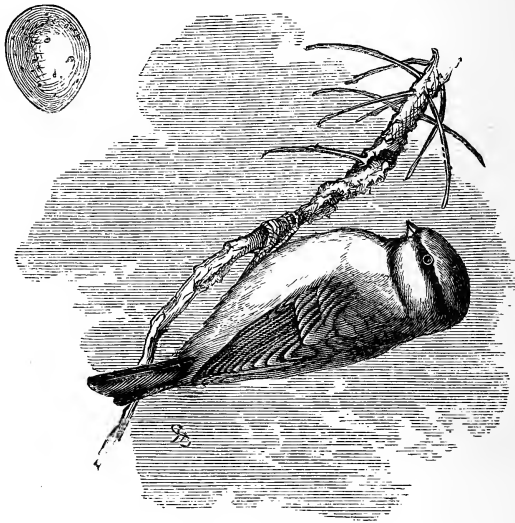
"Can you show us any birds' nests?"

"Yes, I can show you one in a very rum place. Look into that old pair of boots hanging against the wall."

They did so, and to their surprise a tom-tit flew out, and upon closer inspection they found its nest in one of the boots, and in the nest twelve tiny white eggs.

“These are master’s marsh-boots, but when he found that the birds had begun to build in them, he gave orders that no one was to touch them until the birds had hatched off their young ones.”

Tom-tits have a knack of building their nests in strange places. Inside a pillar letter-box, where letters were being tossed



TOM-TIT AND EGG.

every day ; in a hole in a door-post, which was closed when the door was shut, so that the birds were shut up during the night ; in the pocket of a gardener’s coat hanging on a nail. Such are the places in which master tom-tit sometimes builds his nest. Even more curious, however, was a nest I read of which was built by a fly-catcher in the spring of a bell, which vibrated twenty times a day when the bell was rung.

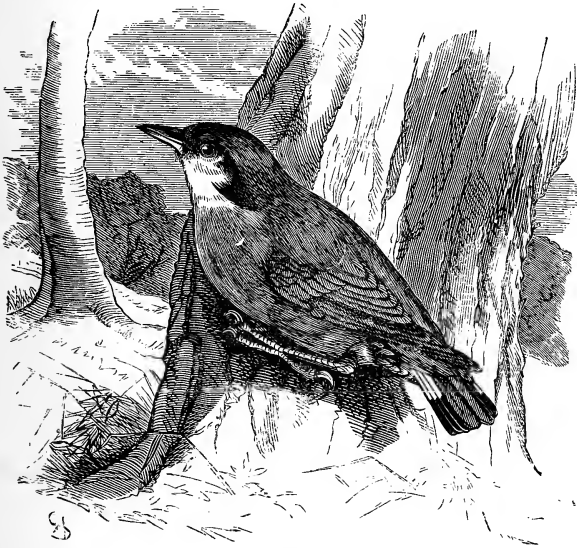
When they reached the wood, Dick’s attention was attracted

by the movements of a bird with a slaty blue back and fawn-coloured belly, which was flitting about the trunk of a large beech-tree.

“What bird is that, Jimmy?” he asked.

“It is a nuthatch. Let us watch it, and perhaps we may see its nest.”

After a little while they saw it disappear into a hole in a neighbouring tree. Going up to this, they found that it was



NUTHATCH.

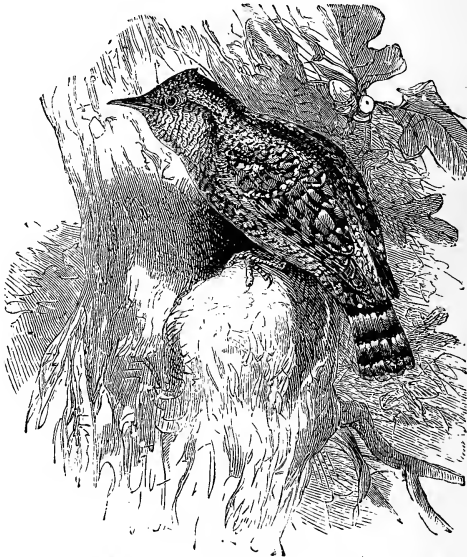
its nest, and that it was made after a fashion peculiar to these pretty birds. The nest was built in a hole in a tree, but the hole being larger than was required by the birds, they had built up the entrance with mud, like that which forms a swallow's nest, leaving an aperture only just large enough for the old birds to get in and out. Dick got on Jimmy's shoulders, and broke away a piece of mud, so that he could get his hand in.

“There are five eggs, white with brown spots, and I have caught the old bird on.”

“Let her go, and take two of the eggs; I know Frank hasn't got any.”

Dick did so, and then moistening the piece of mud which he had removed, in a little pool which was near, he fixed it very neatly in its proper place again.

Proceeding a little further, they saw a bird about as big as a nuthatch, but very different in appearance. It had a curiously mottled and brown-lined back. Every now and then it descended to the ground, and flew back again to a hole in a

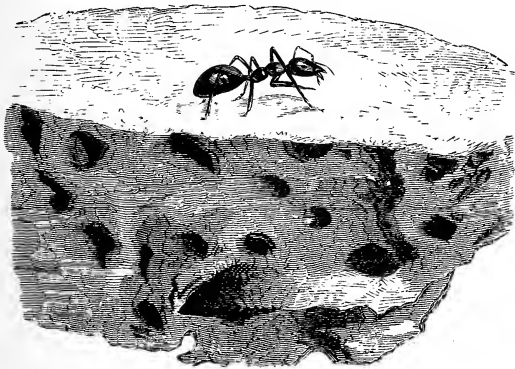


WRYNECK

decayed poplar, varying the journey with wanderings up and down the trunk of that and adjacent trees. As it did so, it stretched forth its head and twisted its neck about in a very peculiar fashion.

“That can be nothing else but a wryneck,” said Jimmy, noticing its movement. “Its nest must be in that hole; but what is it picking from the ground?”

Underneath a large fir-tree was a big conical heap of straw and leaves. Upon examination it was found to be swarming with large chestnut-coloured ants. It was a nest of the wood-ant, and thousands of the tiny creatures were busy dragging straws and sticks to build up the nest, or grains of wheat or other food. It was a grand feast for the wryneck, which had been picking up the ants' eggs, and carrying them to its young ones. The boys stood for some time looking at the busy heap, until from looking at the whole together they came to selecting particular ants and speculating on their destination, for every ant had a purpose in going and coming. One about a foot from the hill was tugging a piece of straw which was evidently too



WORKING ANT AND PORTION OF ANT-HILL.

large for him to pull along unassisted, so he left it, and presently returned with a companion, and the two together managed to take the straw along capitably. Dick was much struck with this incident, which looked more like reason than instinct. And he would have stayed longer watching the ants, had not Jimmy been in a hurry to climb up to the wryneck's nest, and he could not do without Dick's help, who had to give him a back. When he got up he very nearly came down again, so startled was he to hear a loud hissing in the hole like that of a snake. The wryneck flew off, and as there could not be a bird and a snake together in the hole, he concluded that the

bird had made the noise with intention to frighten him, and he boldly put his hand into the hole and popped his fingers into the gaping mouths of some young wrynecks. He nevertheless felt carefully about, in hope of finding an addled egg, and he was not disappointed. There were two addled eggs, which he brought down in safety. They were pure white, about the size of a swift's.



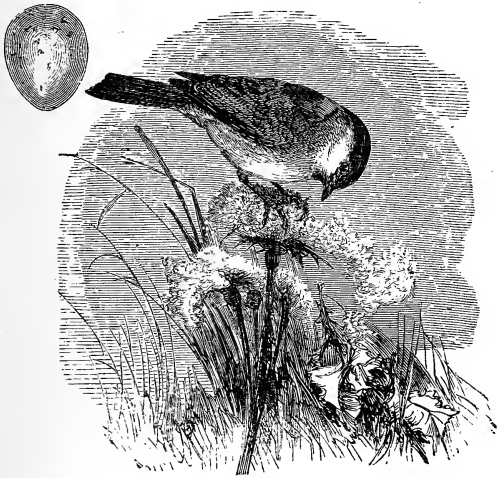
EGG OF WRYNECK.

They now came to something in Dick's line. On a tall nettle-top sat a small tortoiseshell butterfly opening and shutting its wings with the fanning motion peculiar to its tribe. The rays of sunlight falling through the foliage of the trees overhead lit up the beauty of its red and black wings. Dick had not his net with him, so taking off his cap, he made after the butterfly, which launched into strong flight, and sailed away out of the wood and over the meadows with Dick in hot pursuit.

Jimmy went on rambling through the wood, and presently saw a small tree which divided into two branches about a dozen feet from the ground. At this fork of the tree it was split some distance down, and, in this split, some moss betokened a nest of some kind. Jimmy threw a stone up, and as it clattered against the tree, a bird like a tom-tit, but with a black head, flew out. Jimmy watched it as it fluttered about the branches of the tree a few yards off, and soon came to the conclusion that it was a marsh-tit, and that its eggs were worth having.

He accordingly climbed up the tree, and found that he could not reach the nest, which was too far down in the slit. By dint, however, of sitting on one of the forks, and pushing with all his might at the other, he succeeded in opening the crack wide enough for him to insert his hand and reach the nest.

It contained eight eggs, white spotted with red. He took four of them, and sitting in the fork of the tree, he blew them and put them in his box. Then he thought of descending, and attempted to jump to the ground. To his astonishment he found himself brought up sharp, and then he saw that his trousers had caught in the slit, and that a large portion of the slack of them behind was firmly wedged in ; and there he hung with his legs dangling in the air with ludicrous helplessness. He tried to haul himself up again, but he was in such an



MARSH TIT AND EGG.

awkward position that he could not do it. He tried to open the crack with his hands, but with the weight of his body on the one side instead of in the middle, this could not be done. In despair he let go with his hands, in the hope that his trousers would tear and that he would fall to the ground ; but they were too stout for that, and he only narrowly escaped turning topsy turvy and hanging in a worse position. Then he fell to laughing vigorously at the comical scrape he had got into. He did not laugh long, however, for he was very uncomfortable, and kick and struggle as he would, he could not get free.

Then he felt more inclined to cry than he ever had done in his life before. It was so very humiliating to be hung up there like a cockchafer at the end of a pin. When he found he could not get down by himself he began to shout for help.

"Dick, Dick, Dick!" but no Dick came. The fact was that Dick who had been unsuccessful in his chase after the butterfly, had returned to the spot from whence he started, and then not seeing Jimmy about, he concluded that he had gone back to the others—and all the time Jimmy was still up in the tree shouting lustily. Dick heard an inarticulate shouting, but never for one moment imagined it came from Jimmy. When, however, he saw that Jimmy was not with the others, he thought of the shouting; and they all went in search of the missing one, and when they found him they went into such fits of laughter that for some time no one could help him.

"Oh dear, Jimmy, you will be the death of me! This is worse than the big toe affair," said Frank.

"I say," said Jimmy, "don't tell anyone at home about this, there's a good fellow."

"All right, I won't."

Frank had agreed to row in the race, and while Jimmy and Dick sailed the yacht up to Norwich, he went for a racing spin in the four-oar, and found that he was in much better condition than he had thought.

When they reached Norwich they found some letters awaiting them. Frank after reading his, said,—

"Hallo, Master Dick, you never said that you were going to send that dog you bought at Mutford to my sister Mary."

"Didn't I?" answered Dick blushing.

"No, of course you didn't. Well, here is a message for you from her; she says, 'Tell Dick that I am very much obliged to him for the pretty little dog. He is a sweet little dear, but he soon got into a scrape. He went into the laundry and ate up the blue-bag, flannel and all, and he isn't a bit the worse, although Florrie says she is sure his white coat will turn blue.'"

CHAPTER XVII.

The Boat-race. — Winning. — Mr. Marston.—Nightingale and Nest.—
The noise of the Nightingales.

THE next morning Frank had another row in the four-oar, and in the afternoon they practised starts. The boat went very well indeed, notwithstanding the importation of new blood into it at the last hour. The day of the race came, a beautiful summer day with a gentle breeze, and the glare of the sun subdued by light clouds.

The race was at three o'clock, and a goodly company had assembled at Whitlingham to witness it. The course was from below Postwick Grove to Whitlingham, a distance of two miles, the latter part of which was a long straight course, where for nearly a mile the boats could be seen by all the spectators.

"How do you feel, old man?" said Jimmy to Frank as he was in the boat-house dressing.

"Oh, all right; we mean to win."

"I don't know that you will though. I have seen the other crew rowing past on their way to the course. They have got such a splendid long stroke and swing so evenly."

"Yes, they row well," said Marston, who was the stroke of Frank's boat "but they have not got enough of 'go' in them. They take it too easily, and so don't get a good grip of the water; and I think they have over-trained. Still we shall have a hard job to beat them, but we all mean to try. Now look here, you fellows. This is what I mean to do. We will put on a spurt at first, and get ahead of them, and then settle down into a steady stroke."

This was very good advice, for it is a well-known fact that boys row with all the more *esprit* if they can only get a start at the beginning. They are not so good at rowing a 'waiting' race as men are, but if they can but get ahead at first they always have a very good chance against men who are much stronger than themselves.

Dick and Jimmy went to their yacht, and as the wind,

although light, was dead aft, they sailed down to Whitlingham before the racing-boats arrived there. There was a goodly number of spectators on the fair green meadow which lies between the river and the wood, for the race had excited some interest. The gay dresses of the ladies made the scene very lively and pretty. Dick gallantly made it known that the yacht, which they had moored by the winning-post, was at the service of the ladies, and his offer was taken advantage of, and the *Swan's* deck was soon crowded with the fair sex.

The Norwich boat was the first to appear on the scene. On they came with a long swinging stroke on their way to the starting-point. Nothing could be prettier to look at than their style of going. The crew rowed a long stroke which had every appearance of strength. They bent to and fro with the regularity of machines. The oars were pulled well home to the breast, the wrists dropped, and the oars feathered cleverly; the arms shot out, quickly followed by the body until the breast came well between the wide-open knees, but there was just one fault noticeable. The oars were put too gingerly into the water. There was no 'grip.' The men looked as if their boat were too light for them, and they were afraid of making her roll by too great an exertion of force. The men, too, looked pale and over-trained.

A few minutes after they had passed, the boys came by with a quick, lively stroke, such a quick dash in it, and a firm grip of the water at the commencement of the stroke, that promised to do them good service. They did not go nearly so smoothly as their opponents; nor was this to be wondered at, seeing the change which had been effected so late in the day.

Dick and Jimmy ran down the bank of the river to the starting-point, accompanied by many more.

And now the boats were side by side, waiting for the signal to start. As the wind was light there was not much drifting, and a few strokes of the oars of bow and stroke kept them in position.

Frank settled himself well on his seat, and waited for the word. The starter said, "I shall ask if you are ready and then say Go!"

"Now mind," said Marston, "one short stroke to get her away, and then row with all your might to get her ahead."

"Are you ready?"

Frank grasped his oar firmly, and drew in his breath.

"Go!"

The oars flashed in the water, and then it seemed to Frank as if the other crew were fast drawing away from them. He clenched his teeth and threw all his power into the stroke, pulling with every muscle of his body from his scalp to his toes. The river was white with the foam churned by the oars. There seemed to be a deafening noise of rushing water and rattle of oars in the rowlocks. Marston's jersey had been hung on a nail, and this had caused a projection in it at the back of the neck. On this Frank fixed his eyes, neither looking to right or left of him for fear he should make the boat roll and lose time. Then out of the corner of his eye he saw that he was opposite number two in the rival boat, and he knew that they were gaining. Another dozen strokes and they were clear. Then Marston eased a bit, and the boys got into a little better time. Their coxswain tried to take the water of the other boat, and thus nearly caused a foul at the bend in the river, but Marston shook his head at him and he steered his own course.

Frank had now lost his nervousness, and felt pretty comfortable and able to take a little notice of what was passing on the banks, where a small crowd was running at the top of its speed abreast of them; a noise which had been humming in his ears resolving itself into the eager shouts of the partisans of the rival crews.

Dick was well in advance, saying, "Well rowed, number three; splendidly rowed, Frank;" and Jimmy was a little way behind him shouting as excitedly. Frank for a time fell into the error of thinking that he was doing the real work of the boat, and began to row somewhat too violently, when a warning voice from the bank cried out—"Steady, steady number three!" and that recalled him to himself.

They were now in the straight reach, and in sight of the winning-post, and their opponents were steadily gaining on them. "Why doesn't Marston quicken?" thought Frank impatiently; but his stroke knew what he was about, and he kept on steadily until the boats were level once more. Frank's hands were becoming numbed, for he was so afraid of slipping his oar that he grasped it more firmly than was needful. His wind was going too, and his tongue seemed swollen and clove to the roof of his mouth. He ventured a side glance at number three in the other boat, and was relieved to find that

he seemed in quite as bad a plight as himself. An unlucky swan got in the way, and Frank struck it violently with his oar, and very nearly caught a crab in consequence. A sudden puff of wind blew somebody's hat off, and Frank smiled as he saw it float past and knew that it was Dick's.

The oars flashed with increasing quickness, the shouts on the bank grew louder, and still the long slim boats swept over the water side by side, their opponents drawing slightly ahead.

"Now!" gasped Marston; and Frank knew that the time for the final spurt had come, and if the stroke had been quick before it was doubly so now. Frank felt that each stroke must be his last, but he struggled on; and just as he felt faint



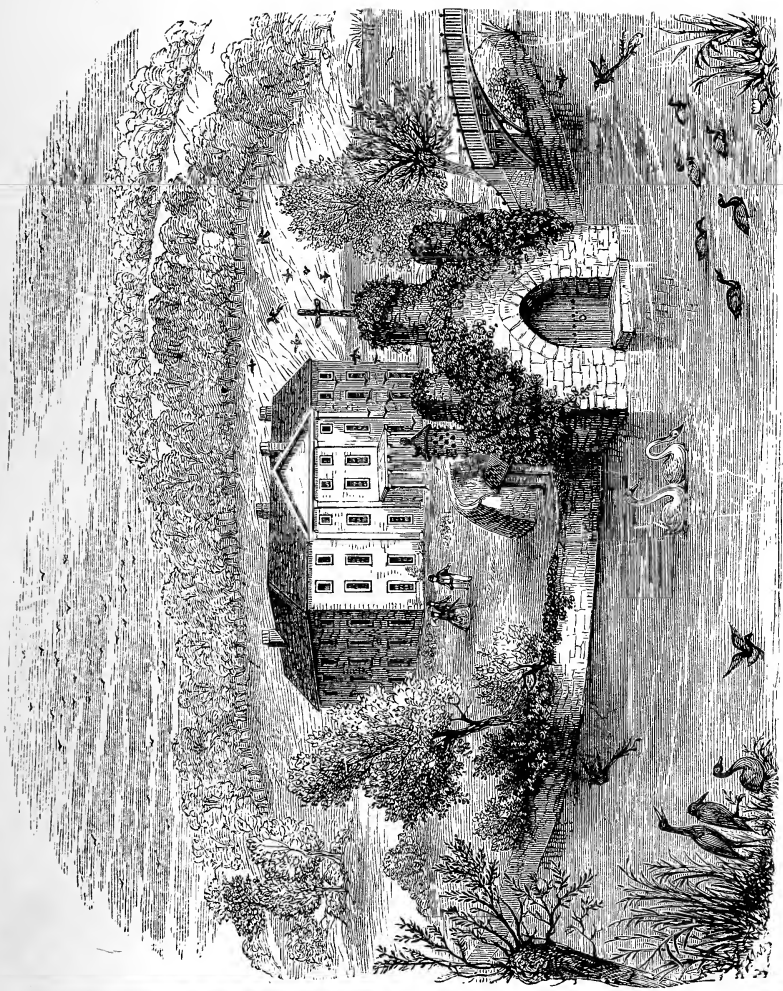
PAIR-OARED BOAT.

(for his want of training had told) and he lost sight of the other boat in a mist, he heard the sound of a pistol and knew that the winning post was reached.

"Who's won?" he managed to ask.

"We have, by half a length," answered the coxswain.

They drew close up to the bank amid the cheers of the people, and they staggered ashore; and Frank went away a little distance and leaned against a tree with his face to the wind, trying to regain his breath again. Who does not know the agony of thus fighting for breath after a severe struggle! Even

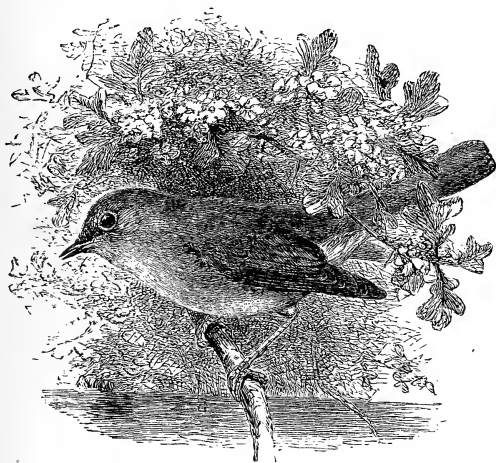


MR. MARSTON'S HOUSE.

the excitement of victory does not atone at the moment for the penalty of over-exertion. Dick and Jimmy fanned him with their hats—or rather Dick used his handkerchief, for his hat had gone to the bottom by this time.

As soon as he had got his wind back Frank turned to the others, and was at once seized by his companions and raised on their shoulders, and then carried in triumph to a carriage where some ladies sat. A tall clergyman approached, and he said,—

“You rowed splendidly, number three; wonderful, considering,



NIGHTINGALE.

as I am told, you had no training for the race. I hope you will be none the worse for it. Will you have some champagne?”

Frank could not resist a mighty draught of the cool wine, although it is anything but a good thing to take at such a time. An orange is the best thing,—it slakes the thirst, and does no injury to the stomach. The clergyman turned out to be Marston's father, and his mother and sisters were in the carriage. They invited our three boys to dine with them that evening; and after the yacht had been taken to her moorings

near the railway bridge, the boys walked a mile out of the town to Mr. Marston's house, and there spent a very pleasant evening. After dinner they played croquet, and once, when it was Frank's turn to play it was found that he was totally oblivious of the game, and had his eyes fixed on an elegant brown bird which was flitting about the shrubs in the garden.

"Now then, Frank," said Marston, "it is your turn." Frank played and then asked,

"Is not that bird a nightingale?"

"Yes, her nest is at the bottom of that bush. Watch how she goes to it."



NIGHTINGALE'S NEST.

The bird hopped about in a promiscuous sort of way, just as if there were no nest there, and then, when she got near it, she hopped upon it in quite an accidental manner.

"She knows that we know her nest is there, because we look at it every day, but she always pretends she is only there by accident."

Frank went to look at the nest. It was untidy in make, built of straw and twigs, and lined with leaves. It contained five olive-brown eggs which were near to hatching.

"You must not take any of these, Mr. Merivale," said Miss Marston.

"No, I do not wish to do so," said Frank, but his looks so belied his words that they all laughed at him.

"There are two more nests about the grounds," said Marston, "and I have some eggs in the house which you can have."

Frank thanked him, and asked if there were any more nightingales about.

"There are so many about that many times I cannot go to sleep for the noise they make."

"Noise!" said his sister reproachfully.

"Yes, when it is dinned into one's ears so much, any singing becomes noisy."

Frank thought his friend was joking, but about ten o'clock they were strolling about the grounds in the bright moonlight, and then they heard nightingales singing all round them. The boys thought they had never heard such sweet sounds. First the song would commence with an intensely sweet, low, single note or pipe. Then would follow a strong clear flood of melody which was entrancing in its richness. Then the bird would cease, and in a few seconds another bird would answer from a little distance. Then the first one would reply, and a third would take up the strain from a different quarter. The moonlight silence of the night, the ravishing strains of bird music which made the grove vocal, and the heavy fragrance of the flowers which floated on the dewy air, made the evening most perfect and beautiful.

CHAPTER XVIII.

A queer Umbrella.—Visit to Scoulton Gullery.—Driving Tandem.—Running away.—Black-headed Gulls.—Collecting the Eggs. Carp.—Wood Argus Butterfly.—Scarlet Pimpernel.—Grasshopper Warbler.—Chiff-Chaff.—Gall-Fly.—Robins' Pincushions.

THE boys slept at the Royal Hotel that night, and to their surprise found Sir Richard's groom there. He had brought the brougham to town for repairs, and had orders to wait until it was finished, which would not be until the next day but one.

In the meantime his two ponies were in the stables with nothing to do. Here was a good opportunity for a long drive. Frank at once suggested that they should drive to Scoulton and see the breeding-place of the black-headed gulls. This was agreed to without hesitation. Then Frank said that as he had a pair of horses they might as well drive tandem, and he undertook to drive. Mason, the groom, objected to this, because he was afraid that Master Frank could not drive well enough; but Frank was positive that he could, although he had never driven tandem before. He said he knew the theory, and he was certain the practice was easy. At last it was agreed that the horses should be harnessed tandem, and that if Frank could not manage them he was to give the reins up to Mason.

"Why do the black-headed gulls breed at Hingham, which is an inland place? I always thought they bred by the sea," said Dick.

"The black-headed gulls don't. Every year as the breeding season approaches, they leave the sea and go to certain lakes or rivers, where from 'time immemorial' they have bred. Scoulton Mere near Hingham is one of these places, and they breed there in countless numbers, going there in March and leaving in July or August. It is a sight worth seeing, I can assure you. There are not many places in England now where they breed in such numbers as they do at Scoulton," answered Frank.

"What a curious instinct it is which leads them there. And how funny that for half a year they should live on salt food by the sea, and then for the other half on fresh-water food," said Dick.

Frank and Jimmy were standing in the archway of the Royal Hotel the next morning wondering where Dick was. It was raining heavily, and they had had to put off starting to Hingham. Presently Dick was seen running up the Walk with his coat collar turned up, evidently pretty well drenched. Under his arm however he had a very nice-looking umbrella.

"Oh, Dick," said Frank as he joined them, "whatever have you been buying an umbrella for, and why, having bought one, do you not put it up when it rains?"

"I believe every person I passed all the way from the top of St. Giles's Street would have liked to ask me that question. They plainly thought that I was a fool." Dick answered rather crossly.

"Well, no wonder. Why didn't you put it up?"

"It is not an umbrella at all, but a butterfly-net;" and he unfolded the supposed umbrella and opened it out into a good-sized butterfly-net.

"I did not much like to be seen carrying a great butterfly-net through the town, so I thought this a good dodge to save appearances, and lo and behold it serves me this trick the first time I carry it."

"Well, it could not help the rain, Dick," said Frank laughing.

These umbrella-nets are capital things, although they are useless in a shower. The reader may easily make one for himself in this way: Get an old umbrella-stick and place the catch which holds the umbrella open, lower down, so as to increase the diameter of your net; then get two slips of strong crinoline steel, make the ends red hot, and bend them with a pliers into little loops. Then fasten one end of each to the top of the stick with a piece of wire, and the other ends to the sliding ferrule. When this ferrule is pushed up to the catch the steels form a circle, to which the net can be attached. Slip the ferrule back, and the net can be rolled up round the stick just like an ordinary umbrella, and a case put over it. A very handy and useful net is thus formed, and one which is very portable. If you do not care to make it, it may be bought from a dealer for a small sum, but I should advise every boy to make himself all the things he can. He will thus not only save his money to buy those things which he cannot make, but he will (which is far more important) learn how to turn his hand to useful purposes, and encourage habits of self-reliance which will be very useful to him in after life. In addition to this, one gets far more pleasure from using a thing one has made oneself, than one which has been bought.

About twelve o'clock the rain cleared away and they decided to start. So the horses were harnessed in a dog-cart belonging to the inn, which also supplied them with the tandem harness, and the turn-out, which looked very creditable, was brought to the front of the inn, and the boys took their seats. Frank and Dick sat in front, and Jimmy and the groom behind. Frank felt nervous as he took hold of the reins, but pretended to feel quite at his ease. To his astonishment their steeds started off very quietly; and as the streets were very clear of traffic, they got out of the town without any accident. As soon, however,

as they got into the open roads the leader evinced a strong desire to look about him, and presently his movements grew so erratic that Dick said he was sure he would turn round and look at them before long. Frank resented this imputation on his skill in driving by giving the leader a cut with the whip, whereupon he attempted to bolt, and it was as much as Frank could do to hold him in. Then sometimes he would hang back, so that the traces were loose, and the wheeler did all the pulling; and then he would start forward and nearly break the traces. After this sort of thing had gone on for some two or three miles, the wheeler, which had been going very steadily, began to imitate the bad example of his leader; and Frank and his companions began to wish they had let tandem-driving alone.

They came to a turnpike gate and, on Frank attempting to pull in the horses in order to pay the toll, he found that they were beyond his control, and after cannoning rather severely against the gate-post, they fairly bolted, and tore away at a great pace along the road, which was fortunately pretty straight and free from vehicles.

"Sit still," said Frank, "don't jump out, or you will come to grief. As long as there is nothing in the way they shall go as fast as they like. They will get tired of it sooner than I shall."

Away they went like the wind, the dog-cart bounding over the ruts and small stones in the roadway so that the boys had to hold on as tightly as they could. A large waggon now appeared in sight, and they rapidly came up with it. Frank tried to turn his horses a little, but they had the bits in their teeth and would not swerve out of their course. The waggoner, seeing the state of affairs, promptly drew his horses and waggon close up to the side of the road in time for the runaways to pass them safely, but the wheels were within an inch of coming into collision. On they went until they came to a rise in the road, and here the horses, seeing that a long hill stretched before them, began to draw in.

"Now," said Frank, "you have come at this pace so far for your own satisfaction, you shall go to the top of the hill at the same pace for mine." And he lashed them up and made them gallop right to the top of the hill, which was half a mile long, and then they were glad enough to be pulled up.

"You will have no more trouble with them now, sir," said Mason, and he was right. The horses went as steadily as

possible the rest of the way, and Frank's opinion of himself as a driver, which had been going down, again rose. Their way led through a fine and well-wooded country; and after the rain, the trees, the long stretches of corn-fields, and the meadows, shone out with their brightest emerald; and in the shady parts, where the sun had not dried up the rain-drops, it seemed as if a sheeny silk mantle had been cast over the fields. About two o'clock they reached Scoulton Mere, which lay by the road side, separated from it by a belt of trees. A keeper was entering the gate into the wood as they drove up, and Frank at once called out to him, and asked if they might go and see the gulls' nests.

"Oh yes, sir, I am going to collect the eggs now, and you can come with me. Bring your horses in here. There is a shed where we can put them up."

"Hurrah, we are in luck!" said Frank to his companions.

They drove into the woodland glade over the softest moss and between great masses of rhododendrons which were still in flower.

Leaving the horses in charge of Mason, they accompanied the keeper to the pool. It was about eighty acres in extent with a large island in the centre. As they reached the banks the air became filled with a thundering noise of wings, and as white as a snowstorm with the numbers of gulls which rose in the air at their approach.

"Oh, there are thousands and thousands of them!" said Dick in amazement.

"And if you look, there are as many on the water as in the air," answered the keeper.

Floating with the peculiar lightness which distinguishes the gull tribe, the birds seemed to occupy almost every yard of water.

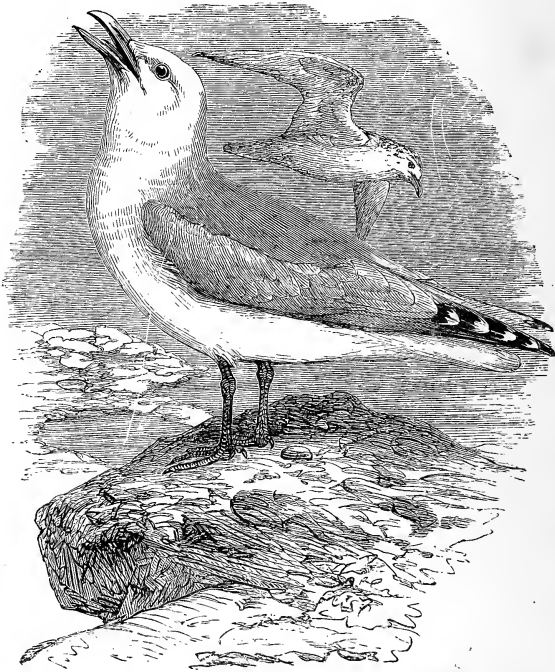
"You spoke of collecting the eggs," said Dick to the keeper; "what do you do with them?"

"Oh, we sell them for eating. They are as good as plovers' eggs. I can get one shilling and sixpence or two shillings a score here for them, and the men who buy them of me get a good profit in Norwich market."

"How many eggs do you get?"

"Oh, that depends upon whether it is a good year or a bad one. In a good year we take 12,000 eggs or more. This year

we have had one take already of 2,500 in one day, and I expect to get about 1,500 to-day. You see my men are collecting already. We only take the first laying of each bird if we can help it, but nests are so close together that it is hard to remember which we have taken and which we have not. If you would like to come on the *Hearth*, as we call the island in the middle,



COMMON GULL.

you can do so, but you must put these mud boards on your feet, for it is very soft and dangerous walking."

They crossed to the island in a heavy tub of a boat, and were surprised to see the number of eggs and nests. The nests were not more than one yard apart, built on the ground like water-hens', but not so cup-shaped. The number of eggs seemed to be about

three in each nest, and their colour was generally olive brown, blotched and spotted with darker brown, but there was a very great variety in their colour. Some were very light, some were very dark, and others were all blue like a heron's egg. The business of collecting the eggs went on very quietly and expeditiously, but the boys were almost made dizzy with the constant swooping of the gulls about their heads, and almost deafened by their cries. One part of the marshy island was so soft that no one could walk upon it, and the gulls which bred there never had their nests disturbed except by the rats and weasels, which naturally abound in such places.



YOUNG GULLS COVERED WITH DOWN.

The black-headed gull derives its name from the black patch on its head, which, however only appears during the breeding season.

“When do the gulls arrive?” the boys asked.

Well, sir, a lot of them come in March and stay for a day or two, as if to see that everything is right; and then they go away, and in a few days afterwards the whole of them come and begin to lay directly. There was some very stormy weather in March this year and they were late in coming, or most of the eggs would have been hatched by now.”

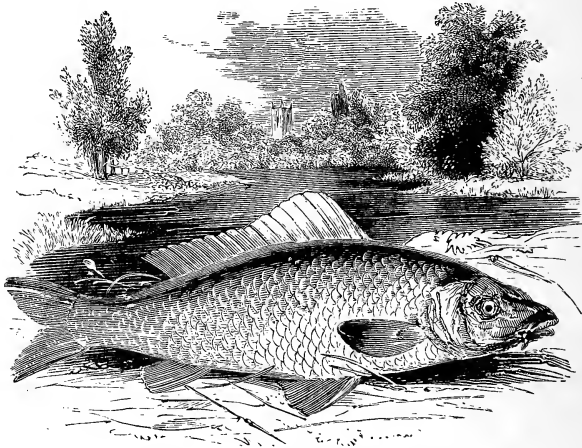
“And when do they leave?”

“In July and August they begin to go away, and leave in the night ; and by the end of August very few are left.”

“One would think that this small lake would scarcely afford sufficient food for them,” said Jimmy.

“Oh they scour the country around, sir. They follow the plough and spread over the fields like rooks. They catch moths and other insects. They eat mice, and if a young bird (not their own) came in the way they would make a meal of it.”

They bought a score of the eggs for the purpose of exchange, and then rowed round the pool watching the wonderful scene.



CARP.

There were plenty of other birds beside gulls there. Coots, water-hens, water-rails, grebes and dabchicks were in plenty.

“I should think that there cannot be many fish here where the gulls would eat up all the spawn,” said Frank ; but as he spoke Dick pointed out the backs of a couple of immense carp which were basking on the top of the water, and a little further on they saw the body of a huge eel, and they were told by the keeper that there were any number of eels there.

They were invited by the keeper to take tea at his cottage, and they had some of the gulls' eggs boiled, and very good

they were. After tea they went for a birds'-nesting ramble through the wood.

"Oh, look here!" said Jimmy; "when we came this afternoon all this place was covered with the scarlet pimpernel, and now there is not one to be seen. They have all closed up."

"Yes," answered the keeper, "they always do that about four o'clock, and all day long when the day is dull. We call them wink-a-peep, and sometimes shepherd's weather-glass."

"How different to these dingy meadow brown butterflies which are fluttering all about us. I have seen them fly on the most damp and cheerless of days, when not another butterfly could be seen. I like them, although they are so dingy and ugly, because they are so hardy and homely."

"What butterfly is that?" said Jimmy, pointing to one that flitted past. Dick's net was ready in a moment, and off he went in chase. Bringing back his prize, they examined it and pronounced it to be the speckled wood butterfly or wood argus. It is a common insect nearly everywhere. It has wings of a deep-brown spotted with buff, and on the wings are pure white eyes with glossy black circles around them. It may be seen in every woodland glade, and is not at all shy.

"Hush!" said Frank; "is that a shrew-mouse or a grasshopper which is making that chirruping noise?"

"It is neither, sir," replied the keeper; "it is a bird, and there it is creeping about the bottom of that hedge like a mouse."

"Oh, I know what it is, it is a grasshopper warbler. Let us look for its nest."

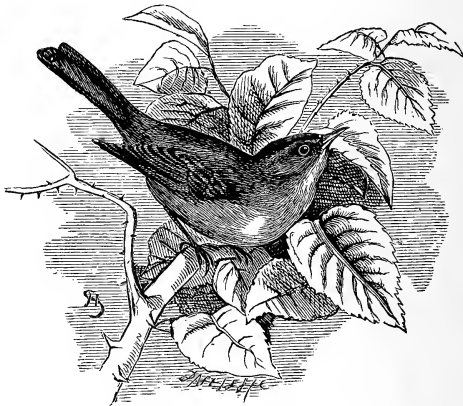
They searched for quite a quarter of an hour before they found it. It was placed on the ground in the middle of a tuft of grass and at the foot of a bush. It was cup-shaped, made of grass and moss, and contained six eggs which were pinkish-white in colour, spotted all over with reddish-brown.

The note of this little bird seems to be of a ventriloquial character like that of the landrail or corncrake. I have searched many a time in the exact spot where the sound appeared to come from, and then perhaps discovered that the bird was on the other side of the lane.

Jimmy next found a nest on the ground. It was arched over like a wren's, and was very beautifully constructed out of moss, hair, and feathers. It contained five round white eggs

spotted with red. In order to identify it more positively as that of the chiff-chaff, which they suspected it was, they watched for some time, and saw the bird, a little pale-brown thing, creep up to it and enter it.

I would particularly impress on my boy readers the necessity of thoroughly identifying the nest and eggs which they find. It is often impossible to tell accurately without seeing the old bird, and as the value of a collection depends upon the accuracy of its named specimens, no trouble should be spared in ensuring thorough identification. This remark applies to collections of every kind. "What is worth doing at all is worth doing well."



CHIFF-CHAFF.

The keeper said, pointing to some red, hairy masses on a bramble bush, "We call these robins' pincushions; can you tell me what causes them?"

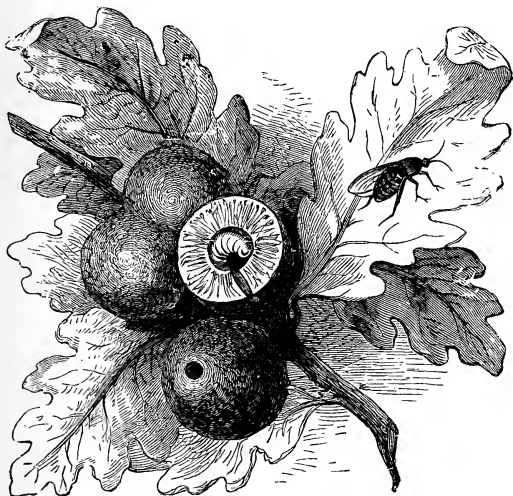
"Oh yes," said Dick, "they are galls caused by a little grub which afterwards turns into a fly."

"They are very pretty things to be caused by a dirty little grub," said Jimmy; "and pray what causes this cuckoo-spit?" pointing to one of the little lumps of water foam which are so common on plants and grasses in the summer.

Dick said they were caused by the larvæ of a fly like

the galls, but as they were puzzled to know how it produced this casing of spit, when they got back to Norwich they went into the library and found, in a number of *Science Gossip*, the following information about it :—

“The larvæ, as soon as it is hatched commences operations on some juicy stem or leaf, no matter what, so it be sappy enough ; thrusts in its long proboscis ; pumps up the sap ; blows it off in small bubbles through a pipe in its tail, and so speedily constructs for itself a cool, moist, translucent home. By and



OAK-GALL-FLY.

by the sap dries up, and the insect changes its form and becomes winged.”

It was now getting dusk, and the gulls were flying low over the meadows, hawking about like swallows. The boys went to see what they were catching, and saw that they were feeding on the ghost-moths which were hovering over the grass-tops with that vibrating and ghost-like flight which is so peculiar to them. Every country boy must know the ghost-moths which, large and small, white and yellow, hover over the hay-fields in the month

of June. Their size alone makes them conspicuous, and they have a weird look as they flit about in the warm, still twilight.

Dick got several for his collection, and then it was time to be returning; and after making due acknowledgment to the friendly keeper they drove back through the quiet night, while nightingales sang around them, and the great red moon rose over the eastern woods, and quenched the pale light of the stars. The horses went well together, and they had no trouble with them; and when they got back to the hotel they went to bed, declaring they had spent a very jolly day.

CHAPTER XIX.

Back again.—Taken in Tow.—Bobbing for Eels.—Glow-worms.—Home.
—Urticating Caterpillars.

IT will be seen that our boys had great capacities for enjoying themselves, and so oblivious had they been of the flight of time, that they had only left themselves two days in which to get home, for they felt bound not to ask for any extension of their holiday. Two days was a very short time to sail all the way down the Yare and up the Bure again; and to add to their dilemma, the wind had settled in the east, and blew light and fitfully all day until five or six, when it would drop. They could have gone back by road and left the yacht to be sent after them, but this would have been *infra dig.*, and was not to be thought of while the chance remained of reaching home in a legitimate way. So they started, and with infinite labour and much tacking and clever sailing, they succeeded in reaching Brundall, about six miles down the river, by the middle of the day.

“This won’t do,” said Frank. “Here comes a steam-wherry. I wonder if they will take us in tow.”

The wherry was hailed, and for a small consideration her

crew consented to tow them to Yarmouth. Their sails were accordingly lowered, and a rope was made fast to the wherry ; and in a few minutes' time they were being pulled along at a good pace by their great, black, ugly friend.

"Now we can enjoy our *otium cum dignitate*," said Dick, throwing himself at full length on the roof of the cabin with the furled mainsail as a pillow ; "and however light the breeze is to-morrow, it will take us home in time ; so I shall write a note home and post it at Yarmouth."

Between the waving reed-beds, through the long miles of marsh, acres of which were white with the silky globes of the cotton-grasses, by whirling wind mills and groups of red and white cattle browsing on the reclaimed marshes, past sailing wherries that surged along before the light breeze with a lazy motion, past white-sailed yachts with gay-coloured pennants at their mast-heads and laughter-loving pleasure parties on board, underneath a bright blue sky streaked with filmy cloudlets and dotted with uprising larks, over a stream that murmured and rippled with a summer gladness, they clove their steady way. With every nerve instinct with healthy life, and hearts which had the great gift of understanding and appreciating the true and the beautiful around them, what wonder if they felt as happy as they could wish to feel, and were full of contentment with the pleasant time it was their lot to pass.

They crossed Breydon Water under widely different circumstances to those in which they first crossed it. Then it was wild and stormy ; now it was fair and placid.

They reached Yarmouth about five, and as the wind still held they turned up the Bure with the flowing tide, and sailed on and on in that quiet peaceful evening, with lessening speed as the wind fell, until at last they barely crept through the water. Even when there was not a breath of air perceptible to the upheld hand, and the surface of the river was as smooth as glass, and the reeds were silent from their whispering, yet a magic wind seemed to fill their large sails, and still they crept on with a dream-like motion. At last that motion ceased, but then they were so close to Acle bridge that they set to work and poled the yacht along with the quants, and in another half hour they were moored by the Staithe.

It was then half-past nine o'clock, but still very light ; and there was a whiteness in the sky to the north-east, which told

them the sun was not very far over the horizon, and that at midnight it would be but little darker than it was then.

After they had had supper Frank said,

“Do you remember those men whom we saw near Norwich, who sat in small boats all the night long, and with a line in each hand, bobbed for eels?”

“Yes; what of them?”

“Why should we not bob for eels to-night? I don’t feel inclined to go to bed.”

“Very well,” said Jimmy; “but can we get the worsted?”

“I will go and ask for some at the Hermitage.”

“What do you want worsted for?” said Dick.

“To catch the eels with; but wait a bit and you shall see. Bring the lantern and come with me.”

Frank marched up to the house and knocked, and when the door was opened by a woman, said,

“Please can you let us have a hank of worsted? I will give you double its value.” The woman looked at him in surprise, and he repeated his question. Then she went indoors, and reappeared with a hank of worsted in her hand. This she threw out to them with a frightened look, and slammed the door in their faces.

“Wait, my good woman, we have not paid you,” said Frank. But there was no answer.

“We seem to have frightened her,” said Dick.

Frank put a shilling under the door, and they went away laughing heartily. Their next proceeding was to look about the damp grass and pick up the lob-worms, which were about in great numbers. When they had each collected a large number they returned to the yacht, and by Frank’s directions threaded the worms on to the worsted, lengthways, with the needle they had used for snigging. In this way they made three large bunches of worm-covered worsted. These bunches they weighted with a stone, and tied strong lengths of cord to them.

“Now,” said Frank, “we can begin to bob. This is the way, Dick:—let the bunch sink to the bottom and then keep the line taut. Let it lie there for some time, and when you feel some sharp quick tugs, it is the eels biting at it. Then haul it quietly on board and shake the eels off. There, I can feel them on my line now.”

“And I at mine,” said Jimmy.

“And I too,” said Dick.

“Then wait five minutes, and haul on board.”

At the end of five minutes they each hauled their lines quietly on board, and on Frank’s were no less than six eels, their teeth entangled in the worsted. On Jimmy’s there were two, and on Dick’s three. They shook the eels on to the deck. Jimmy’s two at once wriggled themselves off back into the water, and Frank and Dick had hard work to keep theirs from doing the same, until Jimmy got out the bucket they used for washing the deck, and in this they safely deposited their captives.

“This is not bad fun,” said Dick, as he brought up three more eels, one of them a large one.

“No, is it?” answered Jimmy, as he followed Dick’s example.

So they went on laughing and talking and pulling in eels until two o’clock in the morning, when their bucket was so full of eels that it would not hold any more.

“Now it is time to turn in,” said Frank; “take up the bucket, Jimmy, and put it by the foremast with something over it to keep the eels from crawling out, while I do up the lines.”

Jimmy took up the bucket, and was walking aft with it, when his foot slipped on an eel that had made its escape, and was wriggling about the deck. In an instant, Jimmy, the bucket, and the eels all went into the water. Jimmy rose to the surface and swam to the yacht, and climbed on board, with the bucket still in his hands, but all the eels had of course disappeared.

“What an extraordinary thing!” spluttered Jimmy, as he rose to the surface.

“Very,” said Frank, as soon as he could speak for laughing; “but hadn’t you better dive after the eels?”

“Do you mind my losing them, Frank?” said Jimmy, rather ruefully.

“Not at all, old man. We don’t want the eels, and a good laugh is better for us.”

While they were undressing, Dick was peering through one of the side lights and at length said,

“I suppose it is impossible for any one to have been smoking here lately, yet there are two or three things which are like cigar-ends gleaming on the bank. Is it possible that they are glow-worms?”

"Yes, of course they are," said Jimmy; "I will go and get them;" and presently he came back with the little, soft, brown things, which shed a circle of phosphorescent light for two or three inches around them.

"Put them into that empty jar with some grass, and we will take them home with us."

The glow-worm is the wingless female of a winged beetle. The male has a dim light, but nothing to be compared to that of his wife. The light issues from the three last segments of her body, and is of a bright yellow in colour. In general she shines from ten to twelve o'clock, but often much later, as on this occasion. Why such a brown, ugly little beetle should have such a beautiful light I do not know. Perhaps it is to guide the male to her. This beetle with the wonderful light has plebeian tastes, for she eats the flesh of snails, and, unlike our Gallic neighbours, she does not wait for the snails' decease first.



GLOW-WORM.

The morning soon shone brightly, and again the fair east wind blew;

"The sun was warm; and the wind was cool,"

and the *Swan* spread her white wings to the favouring breeze and glided between the narrowing banks, where the meadow-sweet in full luxuriance waved its cloudy clusters, the forget-me-not gleamed in turquoise blue, the tall iris or white flag reared its flowers of gold over its green sword-shaped leaves, and the modest ragged-robin showed its thin red petals amid the dew-wet grass.

Through Heigham Sounds and into Hickling Broad, and there at the farther end was a group of people, waving their handkerchiefs in greeting.

"There they are," said Frank; "give them three cheers;" and a "Hip! hip! hurrah!" rang over the water with a hearty good will.

Mr. and Mrs. Merivale, Sir Richard Carleton, and Mary, were all there to meet them.

Frank brought the yacht up to her moorings in his best manner, and in a few minutes they were ashore.

"Dick," said Sir Richard, "I can scarcely believe my eyes. I am delighted."

There was some cause for his surprise. Dick was as brown as a berry. His form was upright and full of vigour, and his handsome face was bright with the smile of health. A greater contrast to the pale-faced delicate boy, who some months before had aroused his father's anxiety, could not well be seen.

"I am glad you have enjoyed yourself, dear," said Mrs. Merivale to Frank, "but I have been very anxious about you, and it has seemed a long time."

Frank laughed merrily, as he put his arm round his mother, and kissed her with all a lover's devotion.

"You are like Martha, mother, who troubled herself about many things. But where is Florrie?"

"Oh," said Mary, "she can't leave her room. She got a little black hairy caterpillar for you, and it has stung her. At least she has a rash all over her, and nasty little red lumps, and she suffers so much."

"That must be a mistake, Mary, about the caterpillar," said Frank.

"No, it is not, Frank," said Dick; "I was reading the other day about urticating caterpillars. The caterpillars of some moths will affect some people like that."

"We have the creature in a glass, and you can see it, and try it, if you like, Frank," said Mary.

CHAPTER XX.

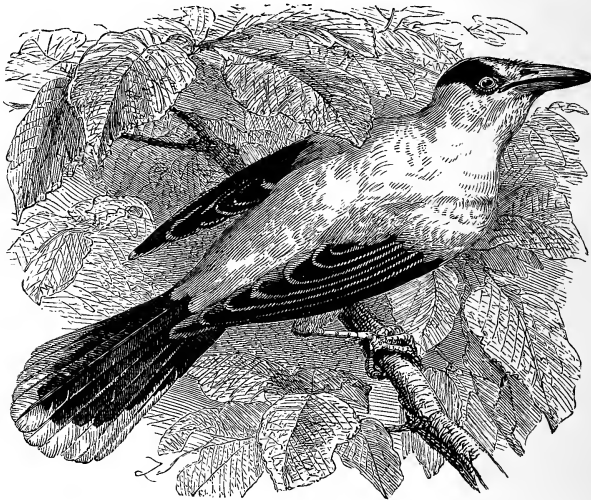
Golden Oriole.—Landrail.—House-martins in trouble.—Siskin.—Peacock and Red Admiral Butterflies.—Winchat's Nest.—Bitten by a Viper.—Viper and Snake.—Slow-worm.

"FRANK," said Mary at breakfast the next morning, "I have seen the most beautiful bird about the orchard and the wood next to it. It is about as big as a thrush, and is a bright yellow all over, except the wings, which are black. What can it be?"

"By Jove," said Frank, "there is only one bird that is like

that ; but it is so very rare that very few specimens have been seen in this country, and that is the golden oriole. Come and show me where it was at once, before I go to Mr. Meredith's."

Mary was nothing loath, and they hastily finished their breakfast and went out together. Scarcely had they got to the orchard when the gardener came towards them with a gun in one hand, and a dead oriole in the other. "I thought you would like to have him to stuff, Master Frank," said the man, and Frank took the bird and thanked him, and when they turned away Frank said,



ORIOLE.

"I am awfully sorry this has happened, Mary. The idea of shooting a rare bird like this at the breeding season. It must have been nesting here, and in a few weeks perhaps, there would have been a brood of young ones about. Let us go into the wood and look for its nest."

In a short time they saw its mate flying about from tree to tree, calling piteously ; and after a little hunting Frank found a nest, which was like a missel thrush's, and placed in the fork of an oak branch. It contained four eggs, white in colour,

covered with claret-coloured spots. Frank did not touch it, hoping that the remaining bird would sit and hatch the eggs; but she soon deserted it and left the neighbourhood, most probably to be shot, and the boys then took the eggs to add to their collection.

With the same vigour which characterised their out-door sports, the boys betook themselves again to their books. In



NEST OF AMERICAN SPECIES OF ORIOLE.

Mr. Meredith's study at the Rectory the three boys sat busily engaged in making Latin verse, an exercise which suited Dick far better than it did the others. Their brown faces and their hands, hacked and roughened as only boys' hands can become, were in great contrast to their studious occupations. Mr. Meredith looked at them with keen interest, and resolved that

he would do all in his power to turn out of his workshop (as he called it) three good specimens of God's handiwork and his own, and as far as in him lay he kept his vow.

Saturday was a whole holiday, and as the boys met at the boat-house to be ready for anything which might turn up, Bell came to them and said, that while cutting the hay in a small meadow which he rented, he had come upon a landrail or corncrake, sitting on her eggs, and so close did she sit that he had cut off her head with his scythe. The boys went to see the nest and found eleven eggs in it, like those of the water-



LANDRAIL OR CORNCRAKE.

rail but larger. They were hard sat, which accounted for the old bird remaining on her nest until the last; but the boys knew how to blow hard-sat eggs, and took possession of them.

Passing by Mrs. Brett's cottage they saw the old lady beckoning to them. When they went to her she explained that she wanted them to aid her swallows. A pair of house-martins were flying about their nest in the eaves, uttering cries of distress.

"What is the matter? Have the sparrows taken possession of it?" said Frank.

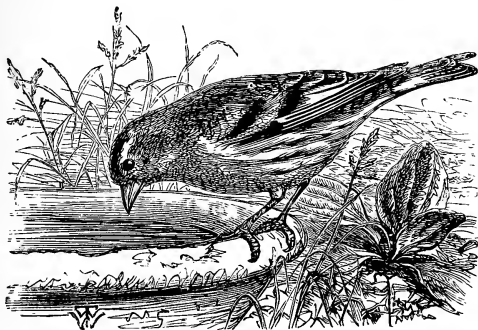
“No, dear, but it seems breaking away from the wall. There are young ones in it, and I suppose the old birds did not make it strong enough to hold their weight. I am afraid it will fall down every minute.”

The boys undertook to put matters right, and with the aid of a ladder they climbed up to the nest, and with a hammer and nails they nailed up the nest in a broad piece of flannel. While they were engaged in doing this, the martins ceased their cries, as if they knew that a friendly act was being done for them; and when the boys left the nest the birds returned to it, and by their busy twitterings and short excited flights seemed to wish to express their gratitude.

Leaving the cottage, they went for a long aimless ramble through the fields and woods, trespassing with impunity, for they were well known everywhere, and visiting every hedgerow and copse on the lookout for nests.



HOUSE-MARTIN.



SISKIN.

They came to a field round which there were hedges unusually high and thick for Norfolk, which is a county of trim hedges and clean farming. Almost the first nest they came to was that of a siskin. The old birds to which it belonged were hopping about the hedge. They were pretty lemon-coloured

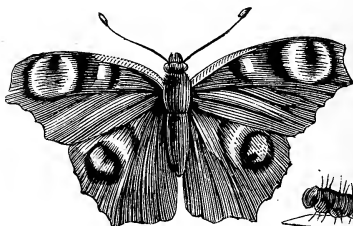
birds with a black patch on their heads and black on their wings. The boys watched them for some time, in order to make sure that they were indeed the siskin, for they are so very rare, especially during the breeding season, that very few nests have been found.

"Well, there can be no doubt about that," said Frank. "They are siskins sure enough. What a very lucky find! Now let us have a look at the nest."

Both nest and eggs were like those of a goldfinch, but the latter were much smaller than a goldfinch's eggs. The eggs were hard sat, but they took three of them and blew them safely; and as they were still doubting the reality of their good luck, when they went home they consulted their books, and Mr.



CHRYSALIS.



PEACOCK BUTTERFLY.



CATERPILLAR.

Meredith, and all came to the conclusion that there could be no mistake about the birds.

They found many more nests in that hedge. Most of them had young ones, for the season was now very far advanced.

Dick soon found something after his own heart, and this was a large bed of nettles. Every stem was covered with large, black, hairy caterpillars. These were the caterpillars of the peacock butterfly,—that splendid insect, which with its crimson and black, and the gorgeous peacock eyes which adorn its wings, is so conspicuous an object in the country in the summer. It is a great pleasure to me to see it as it sits on its favourite perch, the top of a nettle or a bramble, and opens and shuts its wings with the fanning motion peculiar to its tribe. Dick marked this spot, and in a short time he came to gather the gilded chrysalides which on every plant shone brightly in the sunshine.

These he gathered and put in a safe place, and during the summer it was a great pleasure to him to watch the outcoming of these resplendent insects. Just before they were ready to emerge, the colours of their wings could be seen through the thin case which covered them, and with this warning he was often able to catch the insect at the instant of their appearance. Not long afterwards he found a colony of the caterpillars of the red admiral butterfly, a large black insect with crimson bands round its wings, and the under surface marbled with the most delicate tracery of brown and grey. As far as size and beauty go, these two butterflies may be said to be the gems of the entomologist's cabinet. They are common enough in the south, and the young entomologist may look forward to catching or breeding them his first year.

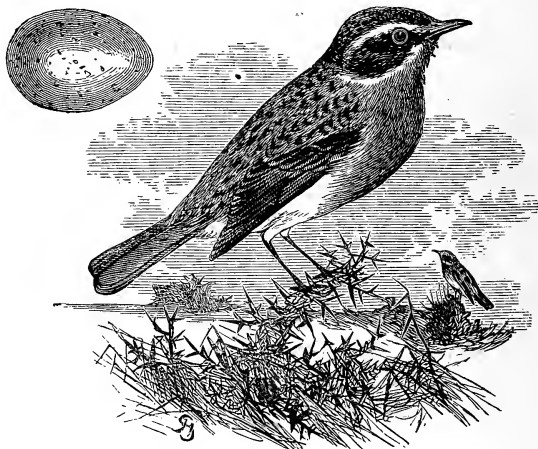


RED ADMIRAL BUTTERFLY.

The afternoon was exceedingly hot, and the sun blazed from a cloudless sky, and birds'-nesting and butterfly-hunting was tiring work. The scent of the hay made the air fragrant, and the sharp whisk of the scythes of the mowers in those meadows which were not yet cut, was the only sound which disturbed the evening stillness.

Crossing one of the commons which are to be met with everywhere in the enclosed districts of Norfolk, they saw a little brown bird fly out of a hole in a low hedge bank. Very cleverly hidden there, in a hole covered with a clump of primrose flowers, was a winchat's nest. It contained five blue eggs spotted with rusty red at the large end. Taking two of these they went on their way, and presently entered a thick and tangled wood, where the underwood was so close that they could with difficulty make their way through it. The brambles and briars were breast high, and the ground was ankle deep in

half rotten leaves of the previous year. In a bush through which Jimmy was trying to force his way he saw a nest, which he took to be a thrush's or blackbird's. He put in his hand just to see if there were any eggs in, and to his surprise he felt something cold and slimy. Before he could withdraw his hand he felt a sharp blow and a prick on his finger, and he drew back with a cry of dismay as he saw a viper uncoiling itself from the nest and wriggle down to the ground, where it was soon lost in the thick vegetation. Frank and Dick hurried up to him, and he held out his finger, in which were two small blue punctures.



WINCHAT AND EGG.

“An adder has bitten me,” he said, with blanched cheeks.

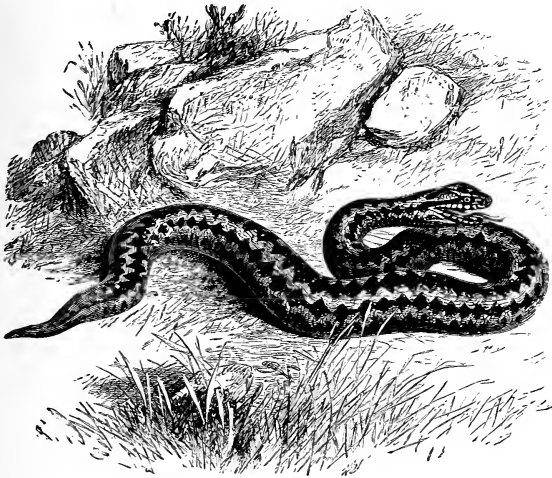
Frank at once whipped out his penknife, and seizing Jimmy's hand, he made a deep cross cut over the bites, and as the blood began to flow, he put the finger to his mouth and tried to suck the poison out with all the force of his strong young lungs, only just waiting to say to Dick—

“Go at once to the village and get a bottle of olive-oil at the chemist's, and come back to the cottage at the edge of the wood. Be as quick as you can.”

Dick burst out of the wood and set off for the village, which was a mile away as the crow flies. As straight as an arrow and as fleet as a deer, Dick sped on his friendly errand, and in six minutes he had reached the chemist's. The chemist gave him what he asked for, saying, that if rubbed in before the fire it was the best remedy.

"Are snake-bites fatal?" said Dick.

"No, sir, not in England, unless the person bitten is very delicate ; but they are very painful, and I should advise you to be quick back."



VIPER.

Dick was off again at the top of his speed, and reached the cottage a quarter of an hour after he had left Frank and Jimmy.

"Well done, Dick!" said Frank ; "but go outside and face the wind a bit. You are dead beat."

Jimmy was pale, but collected. His arm had swelled up to a great size already, and was very painful. Frank held his hand as near the fire as he could bear it, and rubbed the olive-oil in for half an hour ; and then Dick and Frank walked him

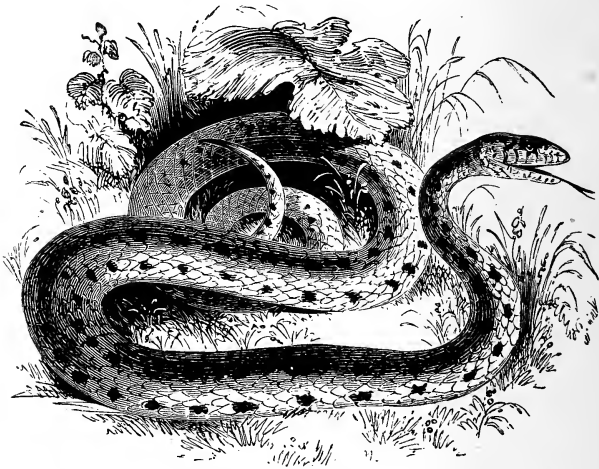
home between them. Mrs. Brett was naturally much alarmed, but Frank soothed her fears, and Jimmy was put to bed.

"Thank you, Frank," he said, "I am awfully much obliged to you."

"Then prove it by going quietly to sleep if you can. You will be all right in a day or two."

"How did you know about the olive-oil being a cure, Frank?"

"I was reading about it not a week ago, and as we were walking along this afternoon I was, strange to say, thinking



COMMON RINGED SNAKE.

about it, and imagining that I was bitten and curing myself; like one does make up pictures and rehearse scenes to oneself, when one has nothing better to do. It was a very strange coincidence."¹

Frank went home with Dick, and they took a short cut through the copse. Dick was looking about him very suspiciously, seeing the coils of an adder in every twisted root. Suddenly his eye caught sight of a snake lying across the path.

¹ The best remedy for viper-bite is the injection of ammonia into the veins.

“There is another viper!” he exclaimed.

“No, it is only a snake,” said Frank, coolly stooping down and taking the snake in his hand, while it coiled about his arm. Dick looked horrified.

“Won’t it bite?” he said.

“No, Dick. Don’t you know the difference between a snake and a viper? Then I’ll tell you. The viper is ash-brown in colour. Its neck is narrower and its head broader in proportion. The viper has a couple of fangs, or long hollow teeth, which lie flat along the back of its mouth, but when it is angry it opens its mouth, erects its teeth and strikes with them. They are hollow, and down through the tubes the poison comes from a bag at their roots. The snake has no such teeth, and it is harmless, for it cannot sting, as many country people think it can, with its long forked tongue which it is now shooting out. Then the snake lays eggs. I dare say if we were to dig in the manure-heaps in the farm-yard, we should find a lot of white eggs covered with a tough, soft skin and joined together with a sort of glue. The viper’s eggs are hatched inside it, and the young ones are born alive.”

“I have read that the young ones of the viper will run down their parent’s throat when alarmed for safety. Is that true?”

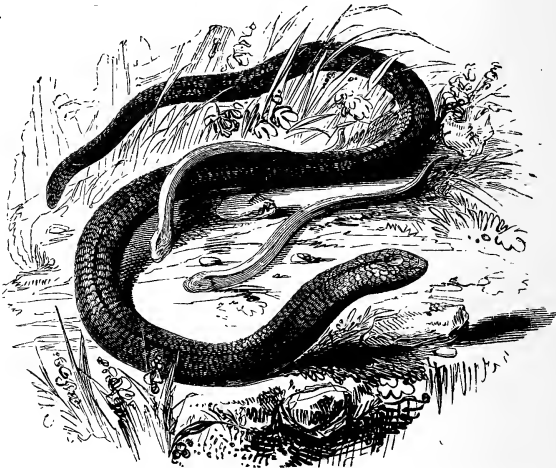
“It seems so strange that I can scarcely think it to be true, but so many respectable people say they have seen it that one does not like to say that it is not so; and it is, of course, difficult to prove a negative. I suppose the question will be settled some day.”

The snake Frank held in his hand was a large and handsome one. It was olive-grey in colour, with rows of black spots on its back and sides, and greenish-yellow beneath, tinged with black. The snake changes its skin just like a caterpillar, but the skin preserves the shape of the snake, and is a very pretty object. Often have I seen a sunny corner in a quiet wood covered with many of these cast-off skins all glittering in the sunlight; and they are so very like real snakes as easily to deceive the casual observer.

During the winter both vipers and snakes hibernate in holes, or under tree-roots, and require no food.

The slow-worm or blind-worm is often mistaken for the snake. It is about twelve inches long, with a smooth skin, and is dull brown in colour. It possesses a curious faculty of parting with

its tail when it chooses. If it is seized by the hand or otherwise annoyed, the tail separates from the body and commences a series of war-dances on its own account. While you are occupied in observing this, the body quietly and expeditiously moves away out of danger. Snakes and vipers live on frogs, small birds, &c., when they can catch them. The slow-worm lives almost entirely upon the white garden-slug.



SLOW-WORM.

Jimmy's arm and side were very much swollen and inflamed, and it was quite a week before he was free from pain. The doctor said that if the olive-oil had not been used he would have suffered very much more from the bite, and the consequences might have been serious, for Jimmy had not a strong constitution. He was very careful after that of putting his hand into a bird's nest without getting a look into it first.

CHAPTER XXI.

Fishing.—Jimmy's Dodge.—Bream-fishing.—Good Sport.—Fecundity of Fish.—Balance Float.—Fish-hatching.—Edith Rose.—A Night Sail.

It must not be supposed that the boys neglected that most fascinating of all sports, fishing. They fished in the broads and rivers whenever they had an opportunity. Pike, perch, bream, and eels—all were fish that came to their net; and now that birds' nesting was over they devoted some special days to the pursuit of the gentle art.

Some years ago, and at the time of my story, the broads were as full as they could be of coarse fish, especially pike; but by the indiscriminate use of the net and the destruction of spawning fish, the poachers have so thinned the water of pike and perch, that the proprietors are preserving them, and the public are agitating for a close time at certain seasons of the year, so as to protect the breeding fish. Even at the present time, however, the bream is so abundant as to afford plenty of sport to every fisher, however poor he may be. In shape this fish is something like a pair of bellows and it is commonly met with from one to five pounds in weight. It swarms in vast shoals and when it is in the mood for biting, you may catch as many as you like—and more sometimes, for the bream is not a nice fish to handle; it is covered with thick glutinous slime, which sticks to and dries on the hands and clothes. Bream-fishers provide themselves with a cloth, with which to handle the fish and wipe off the slime.

One morning Frank, while dressing at his open window, looked at the broad and was surprised to see it dotted with round, bright coloured objects.

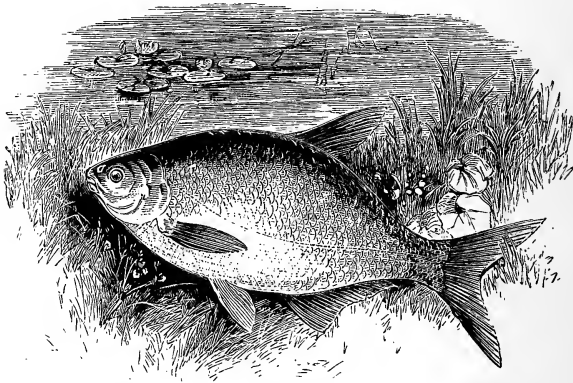
“What can they be?” he said to himself in surprise. “They cannot be trimmers. They look like bladders, but who would paint bladders red, blue, green, and yellow? I am going to see.”

He dressed rapidly and ran towards the water. Standing on the margin was Jimmy, his hands in his pockets and a self-satisfied smile on his face.

“What have you been doing Jimmy?” said Frank.

“Oh! I thought you would be astonished. I bought the whole stock of one of those fellows who sell India-rubber balloons, and I thought I would have a great haul of fish; so I fastened a line and hook to each balloon and set them floating before the wind. Don't you think it a grand dodge?”

“Well, you are a funny fellow. I call it a poaching trick, of which you ought to be ashamed, Master Jimmy but I suppose



BREAM.

you are not. I expect these balloons will burst directly a big fish pulls them a little under the water. There goes one now; I saw it disappear,—and there's another, with a pop you can hear at this distance.”

Jimmy began to look rather blue, and said, “Hadn't we better go off after them in a boat, or we shall lose all our lines? All we had are fastened to them.”

“Oh, you sinner! you don't mean to say that you have used our joint-stock lines?”

“Yes, I have.”

“Then we had better go out at once.”

They got into the punt and rowed off after the toy balloons, which were floating swiftly before the breeze. The first they came up to had a small perch on. The next burst just as they reached it, and they saw the glimmer of a big fish in the water. There were twenty balloons set on the water, and it took them a long hour's work before they could recover all that were to be recovered. Out of twenty they only brought in ten. The rest had burst, and the lines were lost. Of the ten which they recovered five had small perch on, which were not worth having. So Jimmy's grand scheme turned out a failure, as so many grand schemes do. The others chaffed him very much about it, as a punishment for losing the lines, and for doing anything on his own hook without consulting the others.

After a wet week in July it was resolved to have a good day's bream fishing. The broad itself was more adapted for perch and pike, for it had a clear gravel bottom; and the river was always considered the best for bream, because its bottom was more muddy, and bream like soft muddy ground. The boys collected an immense quantity of worms, and taking on board a bag of grains for ground-bait, they sailed one Friday evening down to Ranworth and selected a likely spot in the river on the outside of a curve. They proceeded to bait the place well with grains and worms, and then went to sleep, with a comfortable certainty of sport on the morrow.

The white morning dawned and made visible a grey dappled sky, the silent marsh and the smooth river, off which the mists were slowly creeping. Small circles marked where the small fish were rising; but all about where the ground-bait had been put the water was as still as death. The fish were at the bottom, picking up the last crumbs and greedily wishing for more.

Frank was the first to rise. "Now then, you lazy fellows, it is time to begin. There is a soft south wind and the fish are waiting. We will just run along the bank to have a dip away from our fishing-ground, and then we will begin."

After their bathe their rods were soon put together. Dick fished with paste made of new bread and coloured with vermilion. Jimmy had some wasp grubs, and Frank used worms. They tossed up for stations, and Dick was posted at the bows, Jimmy, amidships, and Frank at the stern. The hooks were baited, and the floats were soon floating quietly down the stream. Frank had a float which gave him a longer swim than his companions.

It was made as follows. The stem of the float was of quill (two joined together) eight inches long, and was thrust through a small round cork which was fixed in the middle of it. The upper end of the float was weighted with shots, so that it lay flat on the water. The weight at the hook end was so placed, that when a bite took place the float sprang upright and remained so, this calling attention to the fact of a bite at a great distance. Frank was thus able to let his float swim down the river much farther than he could have done with an ordinary one, because he could distinguish a bite farther off.

Before the floats had completed their first swim, Dick cried "I have a bite."

"So have I" said Frank.

"And so have I," added Jimmy.

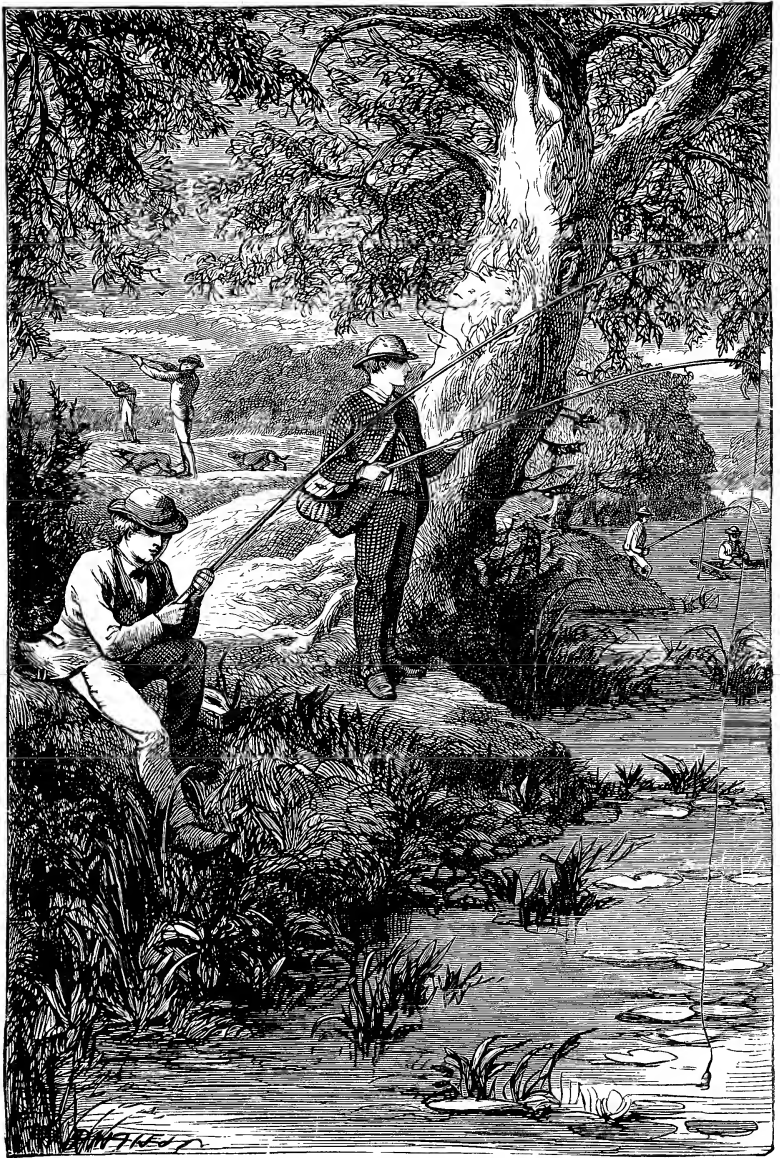
"How absurd," said Frank, as they were all engaged with a fish at the same time. All three fishes were too large to land without a landing-net, and Dick held Frank's rod while he helped to land Jimmy's fish, and then Jimmy helped to land the others.

The fishes were as nearly as possible three pounds each, great slab-sided things, which gave a few vigorous rushes and then succumbed quietly to the angler.

And so the sport went on. At every swim one or the other of them had a bite, and as they did not choose to lose time by using the cloth to every fish, they were soon covered with the slime off them, which dried on their white flannels and made them in a pretty mess.

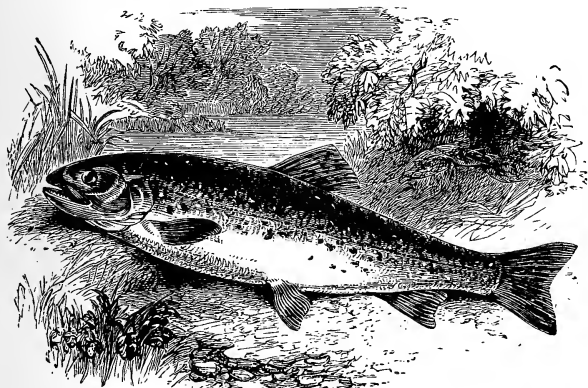
"In what immense numbers these fish must breed," said Dick.

"Yes," answered Frank, "fish of this kind lay more eggs than those of the more bold and rapacious kind, such as the perch and pike. I have read that 620,000 eggs have been counted in the spawn of a big carp. You see that so many of the young are destroyed by other fish that this is a necessary provision of nature. I once saw the artificial breeding of trout by a way which I have never told you of, and it was most interesting. It was in Cheshire, where some gentlemen had preserved a trout-stream and wished to keep up the stock. Into the large stream a small rivulet ran down a cleft in the bank like a small ravine, and in this cleft they had built their sheds. The trout-spawn was placed in troughs which had



ANGLING.

bottoms made of glass rods side by side, close enough together to prevent the eggs falling through, but wide enough to let the water pass through freely. Over these troughs a continual stream of water was directed. The eggs were pale yellow in colour when alive, but if one of them became addled or dead it turned white, and it was then picked off by means of a glass tube, up which it was sucked by the force of capillary attraction without disturbing the other eggs. By and by you could see a little dot in the eggs. This got larger and larger until the covering burst, and the fish came out, with a little transparent bag bigger than themselves attached to their stomachs. They



TROUT.

ate nothing until this dried up, and they lived upon what they absorbed out of it. When the fish were about an inch long they were put into small pools up the brook, where they were watched very carefully by the keeper, who set traps for rats and herons. Then as they got bigger they were put into larger pools, and finally into the river."

"I did not know that water-rats ate fish," said Jimmy.

"No, water-rats don't, although many people think they do. They live only on vegetable food, and it is a pity to kill them; but the common rat, which is as often seen by the river side as the other, will eat fish, or whatever it can get."

It would be tedious to recount the capture of every fish,

since one was so like another. The sport far exceeded their expectations, or anything they had previously experienced; and before six o'clock in the evening they had caught over three hundred fishes, big and little, the largest about five pounds in weight. The total weight was about twelve stone. Norfolk bream fishers will know that I am not exaggerating.

"I am thoroughly tired of this," said Dick at length; "this is not sport, it is butchery, especially as we do not know what to do with them now we have caught them, except to give them to some farmer for manure."

"No," said Frank; "that is why I do not care much for bream fishing, or any sport where one cannot use the things one kills; but we will give the best of these fish to old Matthew Cox and his wife, who have nothing but the parish allowance to live on. I dare say they will be glad enough of them."

Cox, who was a poor old man scarce able to keep body and soul together, was glad indeed to have them, but their number puzzled him, until Mrs. Brett suggested that he should pickle them, and gave him some vinegar for the purpose.

Contrary to Frank's expectation, the wind had not risen, but towards the afternoon died away, and with the exception of a shower, so summerlike that the gnats danced between the rain-drops, the day had been very fine and calm. When the boys left off fishing the water was as calm as at five o'clock in the morning, and there was not the slightest chance of their reaching home that night. This was awkward, as the next day was Sunday, and they had no change of raiment with them. They made the best of it, sending a note home by post to explain their absence. In the morning there was a debate as to whether they should go to church or not.

"Let us go," said Frank. "No one will know us, so it does not matter what we have on."

So to church they went, in their dirty white flannels. It was their intention to sit near the door and try to escape observation, but they found the back seats of the little church full of children, and a churchwarden ushered them all the way up the church to the front pew, which they took. Just before the service began, a lady and gentleman, and a young lady who was apparently their daughter, came into the large square pew in which our boys sat, whereupon the tanned cheeks of our heroes blushed vehemently. The young lady sat opposite

Frank, and every now and then gazed at him curiously. When Frank mustered up courage to look back at her, he thought he knew the face, and as the sermon advanced he recollected that it was that of a friend of his sister Mary's, who had once stayed at his father's house. When they left the church he went up to her, and taking off his cap, said,

"I beg your pardon, but are you not Miss Rose?"

"Yes, Mr. Merivale, but I thought you would not have remembered me. Papa, this is Mary Merivale's brother."

Mr. Rose looked rather curiously at Frank and his friends, and Frank at once answered the unspoken question by saying,

"We are yachting, sir, and we are windbound, without any change of clothes. We should have been ashamed to come to church if we had thought we should meet anyone we knew."

"I am very glad to have met you. You and your friends must come and dine with me," was Mr. Rose's reply.

So, in spite of their slimy-covered clothes and fishy smell, they were welcomed, and had a pleasant day. Edith Rose was so very pretty and nice, that Frank began to think Dick was not quite such a goose for being spoons on his sister, as he had previously thought him.

About ten they returned to the yacht, and found that the wind had risen, and was blowing tolerably hard. As they were anxious to get back in time to be with Mr. Meredith on Monday morning, they resolved to sit up until twelve o'clock and then start homeward. The night was starlight, and light enough for them to see their way on the water; and as the hands on their watches pointed to twelve they hoisted sail and glided away through the grey stillness of the night, beneath the starlit blue of the midnight sky, with no sound audible save the hissing of the water curling against their bows, the flapping of the sails as they tacked, and the occasional cry of a bird in the reeds; and about five o'clock they arrived home, and turned in on board the yacht for a couple of hours' sleep before breakfast.

CHAPTER XXII.

Calling for Landrails.—Landrail Shamming Dea h.—Yellow Under-wing Moth and Wasp.—Dragon-Fly and Butterfly.—Stink-horn Fungus.—Sundew.

ON a stile under the shade of a chestnut Frank sat, calling for landrails. Every now and then he rubbed an instrument on his thigh, which made a noise so like the cry of the corn-crake that one could not have distinguished it. This instrument was very simple, and he had made it himself. It was a piece of hard wood, with a stock to it like the letter *y*. Between the prongs of the *y* was a wooden wheel, with its circumference cut into cogs. A slip of wood was screwed to the stock, and pressed against the cogs. When the wheel was turned by being pressed against the leg, a grating noise was produced, which answered the purpose admirably. Frank sat with his gun upon his lap and called away most patiently, but not hurriedly. A landrail was answering him from the further side of the field, and was approaching nearer. At last, just as its note seemed further off, he caught sight of its long neck and head peering above the grass, which, although it was only the aftermath, had grown a good height. Frank gave another creak, and the bird ran on a few yards nearer. Frank raised his gun to his shoulder and took aim, and as the bird took fright and began to run away a report rang through the summer stillness. The corn-crake ran on with one wing trailing. The distance had been too great, or Frank would not have done so little damage. Just as it seemed that the bird would get away, Dick and Jimmy appeared over the opposite hedge. The corn-crake seeing them, immediately fell down and lay apparently dead. They picked it up and brought it to Frank, who laid it on the ground by his side, and went on with his calling, while the others lay on the grass and talked.

A heap of hay had been left by the side of the hedge, and Dick lazily stirred it with his foot. A large yellow under-winged moth (a moth with grey upper-wings and bright yellow under-

wings bordered with black and very common in our hay-fields) arose, and Dick ran after it with his hat. Another entomologist, however, was before him. A wasp pounced upon the moth, and the two fell fluttering to the ground, and Dick caught them both, and afterwards mounted them in the attitude in which he caught them.

“It was a pity to kill the wasp,” said Jimmy. “It was doing just the same as Frank here. I dare say that corncrake would like to see him killed.”



DRAGON-FLY.

“It is the law of nature” said Frank; “and see, there is a dragon-fly following the wasp’s example.”

A large dragon-fly had seized a white butterfly, and then as it flew in the air, it was depriving it of its wings, which fell fluttering to the ground.

Jimmy happening to cast his eyes upon the corncrake, saw it cautiously lift its head, then gather itself together, looking about, and evidently preparing for flight.

"Look, Frank," he said, "the corncrake was only shamming death!" The corncrake was on its legs and running away by this time, but Frank fired and killed it.

"I would have let it go for its cunning," he said, "but it would only die with a broken wing. It could not live the winter here, and of course it could not migrate. I have known the water-hen sham death in the same way, and many insects do it. I wonder if that is instinct or reason. How does it know that if it seems dead you will not touch it, and therefore it may get an opportunity to escape?"

"It is very wonderful," said Jimmy; "but you will get no more birds to-day after two shots. They will be too wary. Come with me, and I will show you something equally wonderful."

"What is it?"

"I will not tell you. Wait and see."

They followed him to the shrubbery of Mr. Meredith's garden, and he led them to a laurel-bush, and pointed out to them an upright fungus, creamy white in colour, but not by any means handsome. Dick and Frank bent forward to examine it, when suddenly they clasped their noses between their fingers, and ran away, followed by Jimmy exulting.

"How terrible," said Dick, blowing his nose.

"That is the vilest smell I have ever smelt," said Frank, doing likewise. "What is it?"

"The common stink-horn fungus," answered Jimmy; "I thought you would like to see it."

"We might have liked to see it, but not to smell it. Have not you a nose, Jimmy?"

"Yes; but I wanted you to share my pleasure."

"It was uncommonly kind of you, I must say."

Mr. Meredith came up smiling and said,

"Now, if you will come with me, I will show you a plant much more interesting, and a plant which is like Dick, in that it catches flies."

In a small marsh near the end of the garden were some plants of the sundew. It is some years since I gathered one, and I have not one before me to describe, so I quote from a little book called *Old English Wild Flowers* :—

"Of all the interesting plants which grow on marsh-lands, the most singular is the sundew. Those who have never seen its

white blossoms growing, can form but little idea of its singular appearance. Round the root it has a circle of leaves, and each leaf has a number of red hairs tipped with pellucid glands which exude a clear liquid, giving the leaves a dew-besprinkled appearance as it glistens in the sunshine. These have proved a fatal trap to numbers of insects. The foliage and stem are much tinted with crimson, and the plant is small."

CHAPTER XXIII.

Setting Night-lines.—An Encounter with Poachers.

OLD COX met Frank one day, and said to him in his broad Norfolk, which would be unintelligible to you were I to render it faithfully,—

"I wish you would give me some more fish, Mr. Merivale. You catch plenty, and if you would give me some that you doesn't want, I would take them to Norwich market and sell them. I sorely want to buy a pair of blankets for the old woman and me afore the winter comes."

"Well, Cox, you shall have all we catch and don't want," said Frank; and when he saw his friends he said,—

"Let us make a mighty night-line, and set it like the long lines the Cromer fishermen set for cods, and lay it in the broad for eels, and give all we catch to Cox. Two or three nights' haul will set him up for the winter."

So they made a long night-line. They bought a quarter of a mile of stout cord, and at distances of a yard from each other they fastened eel-hooks by means of short lengths of fine water-cord. Cox himself got them the worms, and then one fine night they rowed the punt to the middle of the broad, and set the night-line in the deep water of the channel.

"Well," said Dick, "this is the longest and most wearisome

job I have ever done, and old Cox ought to be infinitely obliged to us. We have been two hours and a half setting this line."

Early in the morning they went out, and took up the night-line, but to their great surprise they found but very few eels on it, and plenty of bream, which they did not want. They were much disappointed at this, and went to Bell, and asked him the reason, for there were plenty of eels in the broad.

"Where did you set the line?" he asked.

"In the deep water of the channel."

"Then that is just the place where you ought not to have set it. At night the eels make for the shallow water to feed, and if the grass is wet they will even wriggle out among it. I have seen them myself many a time. You must set your line along the edge where the water is about a foot or two feet deep, and you will have as many eels as you can carry."

They tried again, and set the line as Bell had directed them, and the next morning they began to haul it in. The first hook came up bare. So did the second, and the third. As they hauled in the line their faces looked very blank, for every hook was bare.

"We are not the first," said Frank savagely, "some other fellows have been here before us, and have taken up the line, and robbed it. They must have watched us laying it. Now I'll tell you what we will do. We will set it again to-night, and watch in the yacht, and if we see any fellows touching it we will give them a drubbing. Are you game?"

"Yes," answered both Dick and Jimmy readily, "we are."

So the third time they set the line, and then as soon as it got dark they crept quietly on board the yacht. They had set the line within 150 yards of the *Swan*, and as there was a glitter on the water from the reflection of the stars, they could see if anyone approached it.

"What shall we do if they do touch it?" said Dick. "How shall we get at them?"

"I did intend to take the boat, and row after them," answered Frank; "but see, we are to windward of them, and there is a good breeze, so that if we let the yacht drift towards them until they take the alarm, and then run the sails up, we shall overtake them."

“And what shall we do then?” said Jimmy, who was becoming a little nervous.

“Run them down—the water is not deep enough to drown them—and take away their boat if we can, and then make them come and beg our pardon before we give it up to them. If they attempt to board us, knock them over again.”

Frank spoke decidedly and hotly, for he was much put out at the theft of the fish. His family had so befriended the poor people around, that it was very ungrateful of some of them to rob their line. His spirits rose, too, with a force he could not resist, at the thought of a midnight engagement, and the chance of outwitting those who had thought to outwit him. Dick and Jimmy were ready to follow their dux at any instant, and anywhere.

“They won’t come till about midnight,” said Frank, “so we may as well take a little sleep.”

About two o’clock they were broad awake, and lying flat on the deck of the yacht, peering into the darkness in the direction of the night-line.

“Hush,” said Dick; “I heard a noise like that of oars.”

They listened, and sure enough they heard the noise of oars splashing in the water, and grating in the rowlocks.

“Here they are,” whispered Frank. “We shall soon be in the thick of it.”

Dick had been trembling for some time in his nervousness, and he thought somewhat bitterly, “What is the matter with me? Am I a coward?” and he felt ashamed at the thought. It was not cowardice, however, but pure nervousness, and the moment he heard the sound of the approaching voices his nervousness departed, and he felt as cool and collected as Frank.

A black patch soon became visible on the water, and they could just distinguish the outline of the boat. A splash in the water told them that the mooring stone had been thrown out, and that the robbers were at work. Frank quietly slipped his mooring, and the yacht drifted quickly towards the men. They were soon near enough to see that there were two men in the boat, and they heard one of them say in a startled tone,—

“I say, Jack, that yacht’s adrift.”

“Is there any one on board, did you see?” said the other.

“No, I don’t think so.”

“Yes, there is though. Pull up that stone and row off as fast as you can,” answered his companion.

‘Up with the sail!’ shouted Frank, as he flew to the helm. Dick and Jimmy threw themselves on the halyard, and the great sail rose with surprising quickness against the dark night. The men in the boat were now pulling away at the top of their speed, but with the wind dead aft the yacht bore swiftly down upon them. The water was only about two feet deep, and began to shallow. The yacht’s centre boards were up, but still she could not go much further, and they could tell that they were continually touching the mud.

“They will escape us,” said Dick.

“No, there is a deep bay just where they are rowing,” said Jimmy.

As the water deepened the yacht started forwards, and in another minute they were on the runaways. Crash went their bows against the boat: she was at once capsized, and her occupants were struggling in the water. One of them scrambled on board the *Swan*, and rushed aft with an oar upraised to strike, but Frank laid the helm over as he put the yacht about, and the boom struck the fellow on the head and knocked him overboard.

Meanwhile Dick had with the boat-hook tried to catch hold of the boat. In this he failed, but he got hold of something far more important, and that was a large fine-mesh net, which the poachers had no doubt intended to use after robbing the night-line. With such nets the damage done to fishing is enormous. Shoals of fishes as small as minnows, and useless for anything except manure, are massacred with them, and it is by the constant use of such nets that the fishing on the broads falls now so far short of what it used to be. Night-lines set for eels are not poaching or destructive. The quantity of eels is so great, that, as long as the young ones are spared, either night lines or nets of the proper kind may be used.

The yacht swept on, leaving the men up to their waists in the water, and swearing horribly. Frank felt a wild impulse to return and fight them, for he was of a fighting blood, such as a soldier should have, but he thought, “If we go back there are sure to be some hard blows, and I have no right to take Dick or Jimmy into a scrimmage and perhaps get them severely hurt, for they are not so strong as I am,” so he refrained, and they sailed back to the boat-house, and waited until the dawn. Their adversaries dared not attack them, but went off out of sight and hearing.

In the morning they took up the line, and were well-rewarded for their previous trouble. The eels they took pretty well loaded the donkey-cart which old Cox had borrowed, and he took them to Norwich and made a good profit out of them.

Having amused themselves once with the night-lines the boys did not care to use them again, for it was *infra dig.* to catch fish for profit. However the profits were good to other people, so they gave the line to old Cox, and told him that he must get some one to set it, and go shares with him.

The next day Frank walked down to the village public-house and stuck up the following notice in the bar,—

“If the person to whom the nets I have belong, will call at my house and claim them, he shall have the nets and a good thrashing.”

Frank was five feet eleven inches high, and well built in addition, and he had always a look on his face which said “I mean what I say;” and the nets were never claimed.

CHAPTER XXIV.

Water Insects.—Aquaria.

ONE July afternoon the boys had been fishing, and to seek some shade and coolness while eating their lunch, they had driven the yacht into a quiet pool among the reeds, which almost met over them. The water below them was very clear and still, and as it was only about two feet deep they could see the bottom quite plainly, and they soon found that it was well worth a close inspection. The pool was teeming with insect life. The surface of the water was covered with tiny whirligig beetles, which were skimming about in mazy, coruscating evolutions.

“Those whirligig beetles,” said Dick, “have their eyes made

with two faces—one to look down into the water, and the other to look into the sky.”

“What a lot you have learnt about insects, Dick, in the course of a few months,” said Frank.

“It is a grand study,” said Dick enthusiastically; “and I have worked my best at it. When one goes hard at a thing it is

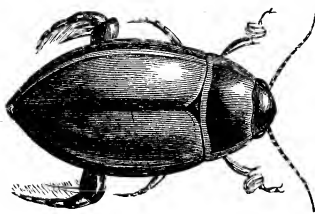


METAMORPHOSES OF FLESH-FLY.

astonishing how soon one picks up a lot of knowledge about it. I have read over and over again about the common insects, or those that are the most noticeable.”

“Well, tell us about all those insects we see now.”

“Look at those long-legged narrow-bodied flies which are sliding along over the surface. These are called water-measurers. That oval beetle which is swimming on its back, and

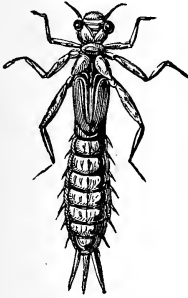


WATER-BEETLE.

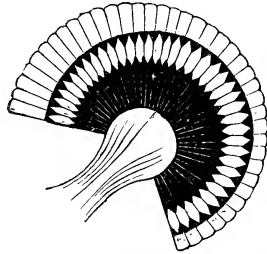
using two legs like oars, is the water boatman. It fastens on to the head of small fish, and soon kills them. It lives in the water, but if put on land it can fly. Look at that brute crawling over the mud, with its lobster-like head. It has sharp claws and a hollow snout. It lies in wait for its victims, and when it seizes them it sucks the juice out of them with its beak. It looks only of a dull brown now, but when its wings are expanded its

body is of a blood red colour, and its tail is forked. It sometimes comes out for a fly at night."

"And what is the fearfully ugly thing climbing up that reed-stem just out of the water?"



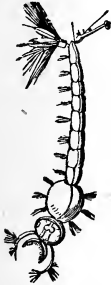
PUPA OF DRAGON-FLY.



COMPOUND EYE OF DRAGON-FLY (SECTION).

"Oh, that is the larva of the dragon-fly. The fly is about to come out of the case. Just watch it for a while."

The larva of the dragon-fly is one of the ugliest of creatures. It has a long light-brown body and six legs. It has a fierce



LARVA OF GNAT.



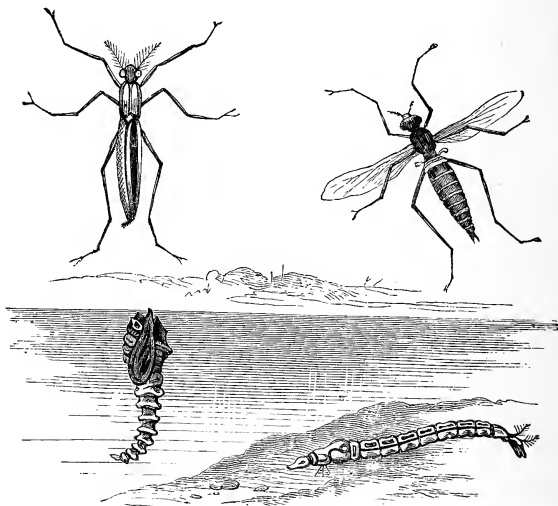
ESCAPE OF GNAT FROM ITS PUPA-CASE.

wide mouth and projecting eyes. Attached to its head are two claws, which with a pincer-like movement, catch up anything eatable and pass it to the mouth. In its larva and pupa state it has just the same appearance, and when it is about to change into a perfect dragon-fly it climbs up out of the water and

emerges out of its case, just like the butterfly, and sails away a perfect and gorgeous insect, leaving its case a transparent brown shell, still clinging to the reed or grass-stem on which it contracted its last change."

"Bother the gnats!" said Jimmy brushing some off his face. "There is nothing interesting about them."

"Oh yes, there is," said Dick. "They lay their eggs on the surface of the water, making a raft of them, and the larvæ



METAMORPHOSES OF PLUMED GNAT.

escape through the bottom of each egg into the water; and I have read that it is a very pretty sight to watch the perfect insect coming out."

"I would prefer their staying down below; they bite me," answered Jimmy.

Crawling along the bottom were numbers of caddis-worms in tube-like cases made of sticks and stones. Inside these cases are the plump white grubs which turn into flies.

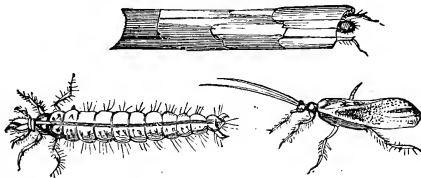
"Where the bottom is gravelly these caddis-worms make their cases of little stones," said Frank.

"Yes, and I read the other day that an experiment had been tried by some one, who took some out of their nests and put them into an aquarium with some finely-broken glass of different colours, and the caddis-worms made their cases of this broken coloured glass, and very pretty they looked."

"Their own bodies must supply the glue which fastens the pieces of gravel or glass together?"

"Yes, it does."

As the fish were biting very badly the boys left the boat early and went for a stroll. While passing through the village they saw a sale of stock going on in the open space round which the houses were ranged. They stopped to look on. The goods which were being sold were the stock in trade of a chemist, and among them were three large glass bowls, such as are used for aquaria. These were put up by the auctioneer in one lot, but there was no bid for them. They were articles not in request in that rural district.



PUPA-CASE, LARVA, AND FLY OF CADDIS-WORM.

"Will no one make me a bid? Everything is to be sold without reservation," cried the auctioneer.

"Five shillings," said Frank.

"Going at five shillings!—going! going!—gone!"—and the lot was knocked down to Frank.

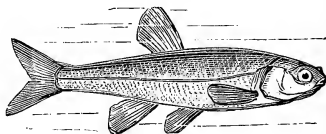
"What are you going to do with them?" asked Jimmy.

"Make them into aquaria, of course. Don't you see they are just the thing. The idea came into my head as soon as I saw them."

"Then we can put some water insects in," said Dick.

The glass reservoirs were placed on a shelf in the boat-house, and the next morning before breakfast they were fitted up. They got a quantity of fine gravel and sand, and thoroughly

washed it in water, so as to cleanse it from all mud and impurity. This was placed to the depth of a couple of inches in each vessel, and a rock-work of worn flints was built upon it. Water was poured in to within a few inches of the top, and pieces of anacharis were planted in the gravel, their roots kept down by the stones. In a day or two the water had got clear, and the plants had taken root, and the boys proceeded to stock the aquaria. The small brook near afforded minnows and sticklebacks in plenty. In a stagnant pool they got some newts and water-insects. From the broad they obtained a few small perch, roach, and bream, and an eel about six inches long. They at first put these all together without any attempt at sorting them, and then the following consequences ensued. The water-boatmen fastened on the heads of the small fish and speedily killed them, and ate them up. The sticklebacks made themselves at home at once, and proved very pugnacious, fighting each other, dashing at a stick or finger, if put into the



MINNOW.

water, but, worst of all, annoying the minnows. Each male stickleback took up a position of his own, and resented any approach to within a few inches of it. With his glaring green eyes, and scarlet breast, he would wage war against any intruder; and when an unsuspecting minnow came within his ken he would sidle up to it, till within striking distance, then dash at it, and strike it with his snout in the stomach. The perch swallowed the minnows, and when they had vanished, attempted to swallow the sticklebacks, but the spines of the latter stuck in the perches' gullets and choked them. The eel, too, would writhe and poke through the gravel and stir it up, displacing the weeds and doing a lot of mischief.

This led to a general reconstruction of the aquaria. The perch were taken out and restored to the broad, together with the eel. The roach, bream, and minnows, were put into two of the aquaria by themselves, and the sticklebacks and water-

insects into the other. Many a fight took place among the sticklebacks and the water-boatmen, in which sometimes the one and sometimes the other came off victorious.

The boys then got some caddis-worms, pulled them from their cases, and put them into a glass vessel filled with water, and having at the bottom some glass of different colours broken into small pieces. In a short time the caddis-worms had made themselves new, parti-coloured cases of glass, which were quite transparent, and through which the white bodies of the grubs could be plainly seen. Frank put these in among the minnows



SMOOTH NEWT.

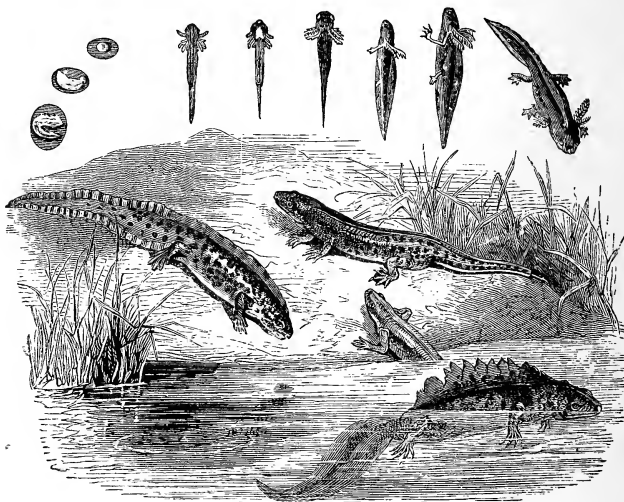
one day, and it was amusing to see the fish darting at the caddis-worms, thinking they would be soft, succulent morsels, and to watch their evident astonishment at being foiled by the hard cases. This suggested an idea to Frank which he afterwards carried out.

None of the sticklebacks kept by the boys built nests or bred, so that they missed seeing a very pretty and interesting sight. "Fishes building nests!" I hear some of my readers exclaiming. Yes, sticklebacks do build nests, and in the number for January 1866 of *Science Gossip* is an interesting account of this habit, which I take the liberty of quoting. When I have

observed any fact in natural history myself, I describe it in my own words; but when I take it from the observation of others, it is fairer to them to use their own words, and far better in the interests of truth:—

“Two pair of sticklebacks were procured about the middle of April,—the males having already put on their spring dress of scarlet and green, and the females being full of spawn.

“After a few days a small hole was observed in the sand near a large stone. To this hole one of the males was paying the



METAMORPHOSES OF NEWT.

most assiduous and extraordinary attention. He was poising himself at an angle of forty-five degrees or thereabouts; he commenced a tremendous motion of his whole body, making the sand a pivot, and at the same time beating the water with his fins. This motion increased regularly in rapidity for a minute or so, when it ceased abruptly, and the fish darted off, either in pursuit of some trespasser whom he chastised (the females not even being exempt), or to obtain materials to increase his nest. These consisted of pieces of stick or moss, which being saturated

with water, were of such gravity as to prevent their rising. He deposited these with great care, leaving a perfectly round hole in the middle, and then having procured a mouthful of sand, laid it over the looser materials to cement them together.

“When completed, the nest resembled a flattened haycock.

“For about a week after this completion it seemed deserted. But one morning it was found that some eggs had been laid. These for the size of the fish are very large, being about the size of a middling-sized shot. They hatched in about from ten days to a fortnight,—the young fish remaining in the nest until the yolk-bag was absorbed, when, being large enough to



WATER-FLEAS

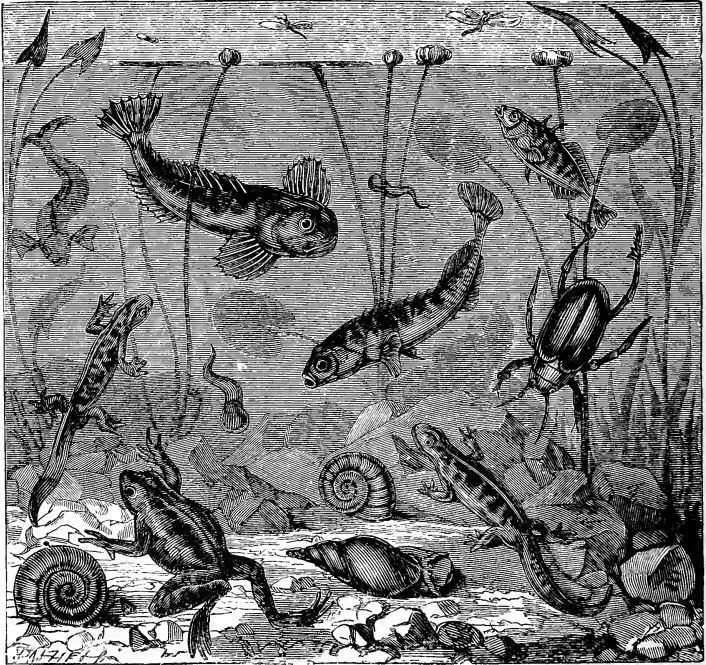
ANIMALCULÆ IN DROP OF WATER,
AS SEEN UNDER THE MICROSCOPE.

look after themselves, they went their way. The parent who had so tenderly guarded them took no further heed of them, and himself died—such being the case in both instances which came under notice, both parents sickening and dying from the effects of spawning and watching, or perhaps from the aquarium not being fitted for their recovery.”

Those who keep aquaria in an intelligent manner and study the habits of the creatures they imprison, will find it both interesting work, and a never-failing source of amusement. It is very little trouble. When the water is put in, and the plants begin to grow, the water need not be changed. The

oxygen produced by the plants will keep the water pure, and will supply it with air.

The green confervoid growth which rapidly forms on the sides of the aquarium must not be all wiped off, for it assists greatly in keeping the water pure and healthy. Tie a piece of

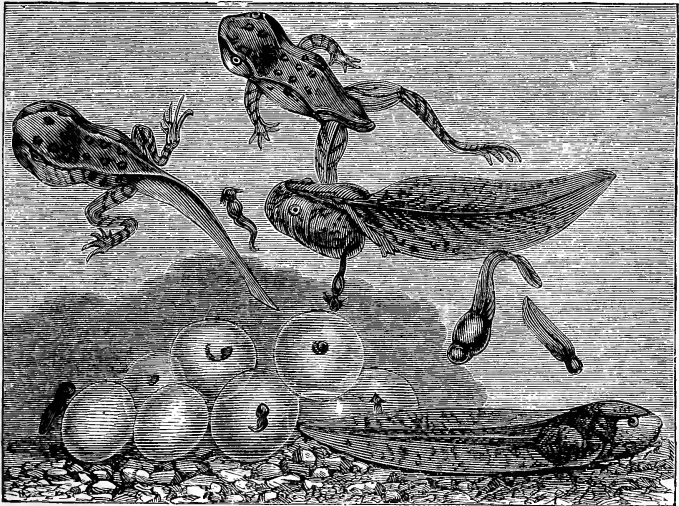


FRESH-WATER AQUARIUM.

sponge to a stick, and with this you can wipe it off from that side where it obstructs the view, without disturbing the rest of the aquarium. If you have no cover, and dust accumulates on the surface of the water, it may easily be removed by means of a piece of paper laid on the surface of the water for a few minutes. The dust will adhere to this, and be taken away

with it when it is removed. The confervoid growth is best kept down by the common water-snail, several of which should be kept in the aquarium.

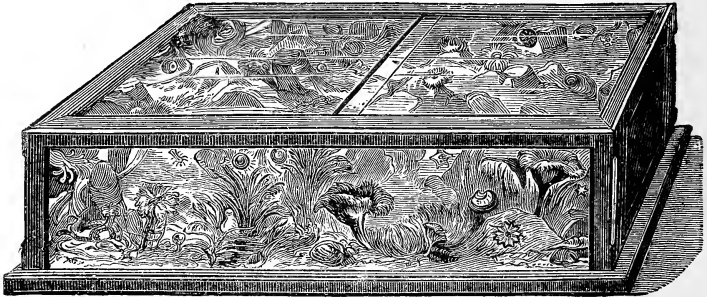
You must of course feed the fish occasionally with worms, insects, and bread; but give them very little at a time, or you will foul the water and render it muddy, and the fish will sicken and die. Keep these few hints in mind, and you will have no trouble in managing your aquarium.



METAMORPHOSES OF FROG.

From aquaria to flowers is a sudden transition, but a bunch of violets has just been held to my nose to smell, and their sweet fragrance has borne me in thought from my study, where I am burning the midnight oil, to the green woods and fields of my boyhood, and then a sudden review of events which have happened since in my life, makes me more thankful than ever that that boyhood was, as far as natural history is concerned, a prototype to the boys of whom I am now writing, and makes me wish to urge the more strongly upon you

the almost boundless advantages which follow the study to all. You will of course clearly see that my aim in writing this book is not merely to amuse, but to teach you some of the wonders which lie ready for you to explore, and the delight of seeking



SEA-WATER AQUARIUM.

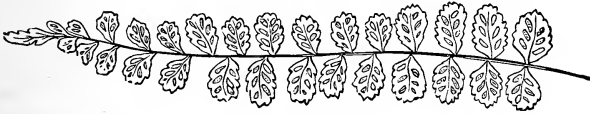
and discovering those wonders. I do not, however, want to moralize, because if I do you will skip my moralising, so I will pull up in time and get on with my story.

CHAPTER XXV.

Making a Fern Case.—Ferns.—Harvest Mouse.—Mole.—Ladybird.—Grasses.

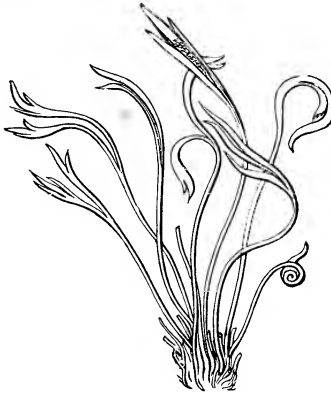
FROM ten till four the boys were engaged with Mr. Meredith, but they had a holiday on Saturday, and by rising early they could gain so many of the fairest and most beautiful hours of the day that lessons seemed but an interval between a long morning and a long afternoon. They thus made plenty of time for their numerous occupations.

Mary said to Jimmy one day, "Will you make me a fern-case? Frank has so many things to do. I have been promised



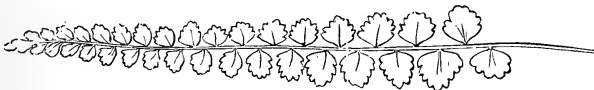
WALL SPLEENWORT.

a lot of ferns from Devonshire. A friend of mine will send them to me by post, and I should so like to have a nice little fernery for my bedroom window."



FORKED SPLEENWORT.

Jimmy gladly promised to make one for her, and Dick, who would have liked to have had the commission himself, volunteered to help him. They first of all made a strong deal



GREEN SPLEENWORT.

box, about two feet six inches long, and one foot six inches broad, and six inches deep. This was lined carefully with

sheet lead, which was to make it perfectly water-tight. They then made a wooden framework, with a pointed roof, to fit on the top of it. This they glazed with ordinary window-glass, and painted all the wood-work black. It was now ready for the soil. First they put a layer, about two inches deep, of broken sandstone, in order to ensure perfect drainage, and mixed with this were some lumps of charcoal to keep it pure. Then they filled up the box with earth, mixed in the proportions

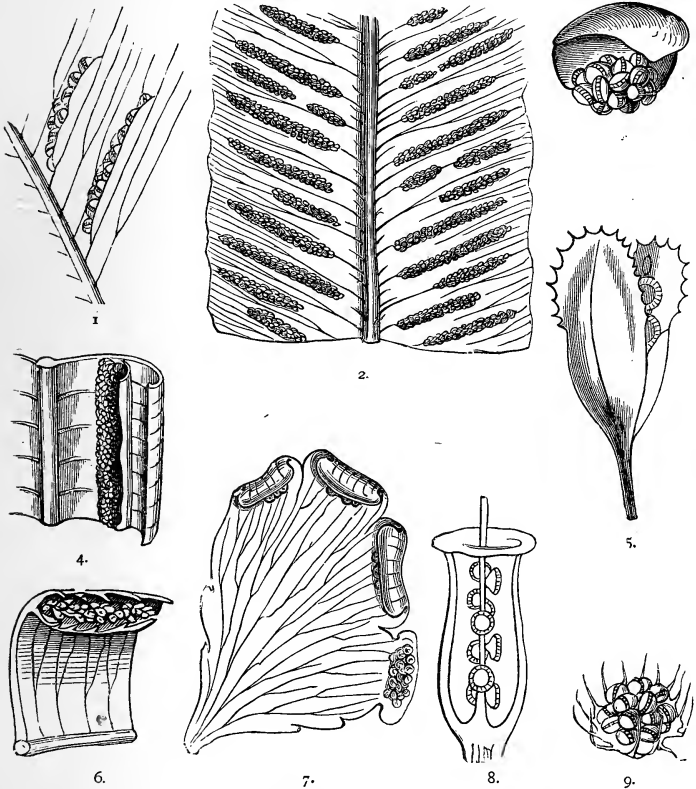


OAK FERN.

following :—one-third part of garden mould, one-third part of sand, and one-third part of peaty earth, with an admixture of dead leaves. In the centre of the rockery they built up a framework of curiously water-worn flints, and then they carried the affair in triumph to Mary's room, where they planted the ferns she had received from her friend—glossy, whole-leaved hart's-tongues, delicate, black-stemmed maiden-hair, ladder-like polypodies and blechnums, feathery lady-ferns, light green and branching oak-ferns, and many another species, which, notwithstanding their removal from the Devonshire lanes, grew and

flourished in Mary's fern-case, and soon became a sight most pleasant to the eye.

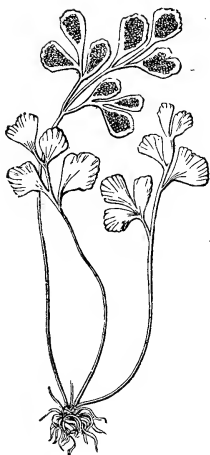
To anyone fond of ferns nothing can be more interesting



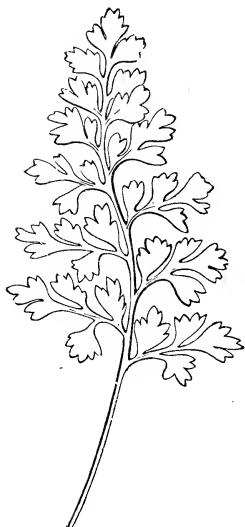
FRUCTIFICATION OF FERNS.

1. *Asplenium*. 2. *Scolopendrium*. 3. *Cystopteris*. 4. *Blechnum*. 5. *Hymenophyllum*.
 6. *Pteris*. 7. *Adiantum*. 8. *Trichomanes*. 9. *Woodsia*.

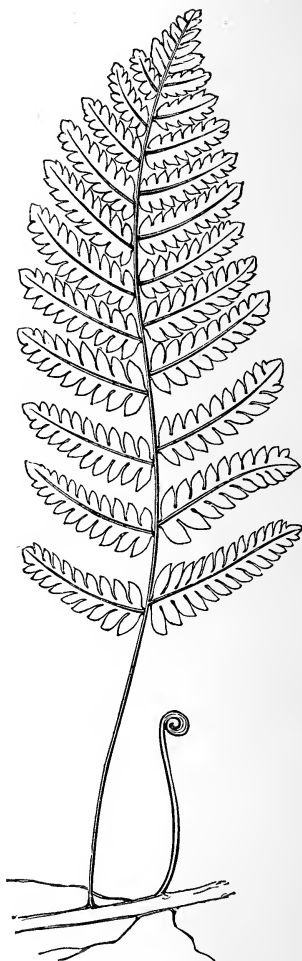
than a fern-case. Nearly all ferns grow well in them, if they are properly attended to. Whenever the soil becomes dry on the surface, they should be well watered, and this should not be



WALL RUE.



JERSEY FERN.



MARSH FERN.

done too often, or it will encourage the growth of mould. The moisture will evaporate and condense on the side of the glass, and run down again to the earth, so that there is very little waste. The plants thus create an atmosphere of their own, and will thrive in it wonderfully.

One day it was so intensely hot that it was impossible to do anything but lie in the shade. The boys had bathed twice, and the deck planks of the yacht were so burning hot that



HARVEST MOUSE AND NEST.

they could with difficulty stand upon them. They sought a shady corner of the paddock, and there underneath a tall hedge and the shade of an oak they lay, and talked, and read. Frank was teasing Dick with a piece of grass, and to escape him, Dick got up and sat on a rail in the hedge which separated them from the next field, which was a corn-field. This quietly gave way, and Dick rolled into the next field, and lay among

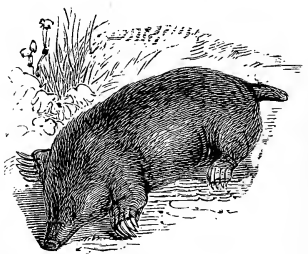
the corn quite happy and contented. Suddenly he called out—

“Come and look at this nest in the corn-stalks! It can't be a bird's. What is it?”

Frank and Jimmy went through the gap and examined it.

“It is the nest of a harvest mouse,” said Frank, “and there are half a dozen naked little mice inside.”

The harvest mouse is the smallest of British animals. Unlike its relatives, it builds its nest in the stalks of grass or corn at a little distance from the ground. The nest is globular in shape, made of woven grass, and has a small entrance like that of a wren's.



MOLE.

“And here is a mole-trap,” said Jimmy, “with a mole in it. What smooth glossy fur it has! It will set whichever way you rub it.”

“Yes; and don't you see the use of that. It can run backwards or forwards along its narrow burrows with the greatest ease. It could not do that if the fur had a right and a wrong way.”

“Can it see?” asked Jimmy, pointing to the tiny black specks which represented its eyes.

“Oh yes. Not very well, I dare say; but well enough for its own purposes. It can run along its passages at a great speed, as people have found out by putting straws at intervals along them, and then startling the mole at one end and watching the straws as they were thrown down.”

During the autumn and winter the mole resides in a fortress, often at short distances from the burrow where it nests. This

fortress is always placed in a position of safety, and is of a most complex construction. It is a hillock, containing two or three tiers of galleries with connecting passages, and from the central chamber it has passages, or rows, extending in different directions.

The boys returned to their couches in the long grass in the shade, and Frank was soon too sleepy to tease, but lay on the broad of his back, looking up at the blue sky through the interstices of the oak branches. Dick was studying the movements



LADYBIRD AND ITS STAGES.

of a ladybird with red back and black spots, which was crawling up a grass-stem, and wondering how such a pretty creature could eat a green juicy aphid, as it has a habit of doing. Jimmy was turning over the pages of his book, and looking out the plates of flowers, and comparing them with some he had gathered. He was rather bewildered and somewhat discouraged at the immensity of the study he had undertaken. No sooner did he learn the name of a flower than it was driven from his head by that of another, and having attempted to do too much in the beginning, he had got into a pretty state of confusion. He

had given up the idea of keeping pace with naming all the beautiful flowers he had found. He gathered and dried them, and left to the winter evenings the task of arranging and naming them.

"I say," called out Frank, "around my face there are at least seven different kinds of grasses. Can you name them, Jimmy?—and how many different kinds of grasses are there?"

"I can name nothing," said Jimmy dolefully, "but I will look it up in my book and tell you. Here it is, but their name seems legion. You must look at them for yourself. The plates are very beautiful, but the quaking grass, of which there is any quantity just by your head, is the prettiest."

"They seem as pretty as ferns" said Frank. "I must learn something more about them."

A day or two after this Mr. Meredith said to them, when they had assembled at his house in the morning :

"Now, boys, from something a little bird has whispered to me, I think you stand in need of a little punishment, and I therefore mean to give you a lesson. You are by far too desultory in your study of natural history. You attempt to do too much, and so you only obtain a superficial knowledge, instead of the thorough and practical one you ought to have. You are trying to reach a goal before you have fairly started from the toe-line. I allude more especially now to botanical matters, because I know most about them, and that is all I can help you in. Therefore you will be kind enough to translate into Latin this Essay which I have written on the Life of a Fern."

"That is anything but a punishment, sir," said Frank, laughing.

The boys set to work with great zest at their novel lesson. I set the English of it out in the next chapter, and I particularly request my young readers to read every word of it.

CHAPTER XXVI.

The Life of a Fern.¹

ONE of the most marvellous of "the fairy tales of science" has now to engage our attention for a time. The growth and fertilization of the seeds—more properly called spores—of ferns, present phenomena of remarkable singularity and interest. Growth is advisedly named first, as in the present instance it really does occur before fertilization, which is not the primary event in the life-history of a fern.

But a few words must be devoted to the preliminary question: What is a fern?

The vegetable kingdom is divided into two great provinces, allotted respectively to the flowering and the flowerless tribes. The flowering plants have several distinct and visible organs for the formation and fertilization of their seed, to each of which is assigned a special and necessary office. In the flowerless section, on the contrary, there are none of these visibly separate agencies in reproduction, and what are usually termed the seeds do not show any parts representative of the developed product. In the true seeds, which belong to flowering plants alone, are contained the rudiments of a stem, leaves, and root, but in the spores of the flowerless plants nothing of the kind is found. The spores, again, are microscopic, while the smallest of true seeds can be not only seen but easily picked up. You have, doubtless, met with the peculiar fungus called a puff-ball, and amused yourselves by watching the little clouds of impalpable dust which are shaken from it on the slightest motion. Those fine clouds, not nearly so visible as a film of candle-smoke, are composed of innumerable spores, and such are the representatives of seeds in every member of the great section of the flowerless plants.

¹ For this Chapter I am indebted to my friend Mr. William Whitwell, of Oxford.

Now it is peculiar to ferns, that the cases in which these spores are enclosed grow directly from the veins of what is usually called the leaf, but is more correctly termed the frond, and always appear upon the back or at the margin.

Ferns, then, are flowerless plants which bear their spores in cases growing upon the back or margin of the leaves.

In order that the phenomena of growth and fertilization in ferns may be clearly understood, it is necessary to refer to the process as taking place in flowering plants. The tulip is most appropriate for an illustration, inasmuch as its various parts will be recognised with ease.

At the bottom of the blossom is a thick green oval body called the ovary, which afterwards becomes the seed-vessel. At the top, this narrows into a short column, surmounted by a three-cleft knob. Between the ovary and the gorgeously painted flower-leaves are six curious organs, termed stamens, consisting each of a long and rather slender stalk, and a head formed somewhat like a hammer.

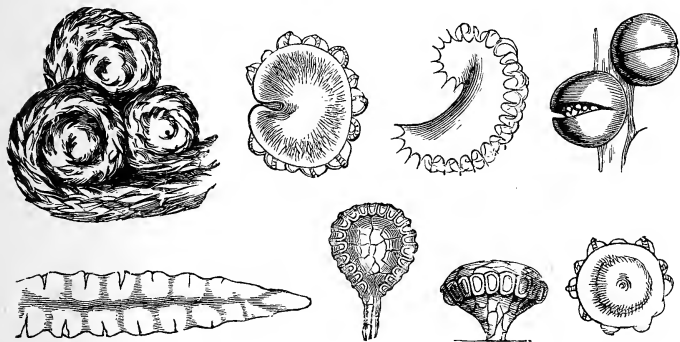
If the green oval ovary in the centre is cut in two, it will be found divided into three chambers, in one or another of which, not usually in all, will be seen a row of little knobs or buttons attached to the partition in the middle. These little buttons are ovules, or seed-germs, and the special office of the ovary is to produce these germs, and to contain them until their full development and complete ripening into seeds. But if the knobs are left just as they are, unfertilized, they can never become seeds, and the plant will fail to reproduce its kind.

Turn we now to the stamens. Each of their hammer-like heads has two chambers, full of beautiful little grains which are called the pollen. Each grain is tastefully and delicately marked, and holds a transparent watery fluid, in which a number of extremely small solid particles are floating. What is required for the fertilization of the seed-germs is—that this fluid should be conveyed to and taken up by them. But they are in the centre of the thick green ovary—this in the chambers of the stamens!

A simple arrangement brings all about. At a certain time we may see the black heads of the stamens covered with a fine flour, which adheres to whatever touches them. This flour is made up solely of pollen-grains, escaping in unimaginable numbers from the chambers where they are produced. At the

same time the knob which crowns the seed-vessel puts forth a thick and gummy ooze. The stamens are just long enough for their heads to rise a little above this knob, upon which the pollen, when escaping as I have stated, falls in great quantity, and is there held fast.

Each grain then begins to swell, and to sprout (as the Rev. J. G. Wood has it) something like potatoes in a cellar. All the sprouts, however, pierce the knob, and push downwards until they reach the seed-germs underneath. Each sprout is a tube of extreme minuteness, and when it reaches a germ, attaches itself thereto, and, through the channel so formed, the fluid is drawn out of the pollen-grain and absorbed by the embryo seed. Fertilization is thus effected, and the growth and development of the germ proceeds until it becomes a seed fully able, when planted, to reproduce a tulip.



FERN SPORES.

In ferns, the spores ripen and are ready for dispersion and partial growth without any process of the kind. But, in truth, fertilization is as necessary to the continuance of ferns as to the perpetuation of other plants. The main difference lies in this: that the means of fertilization, and the real germs of new plants, are produced from the spores after they begin to grow.

When a spore falls upon a proper place for its development,

a portion of the outer membrane begins to swell, and a tongue-shaped projection is formed, which becomes a sort of root. The one chamber of the spore gradually subdivides, and becomes two, four, and so on, until for the simple spore we have a tiny leaf-like expansion, now known as the *prothallium*, or representative of a leaf.

Further than this the spore alone has no power to go, and the prothallium is not truly the germ of the future plant. True germs, needing fertilization, are produced upon it, and also the means whereby they can be fertilized. These can be distinguished only by use of the higher microscopic powers. If a portion of the prothallium is examined, it will be found studded with little bladders, containing round semi-transparent bodies of a greenish hue.

There may also be seen, though in fewer numbers, pellucid cells of an entirely different character, consisting apparently only of a fine membrane, forming an angular chamber, shaped in some instances like a lantern of extreme delicacy and elegance. From the top of this chamber a funnel-like shaft descends to a little germ which is situated at the bottom. This germ is the real original of the future plant, and the round bodies in their little cells, just before described, are the means whereby it is to be fertilized and receive energy to develop into the perfect fern.

But how can the needful contact between the germs and the fertilizing bodies be brought about? Observation and experiment supply a strange answer to this question.

The round bodies in the tiny bladders acquire a spiral or shell-like form when they become mature. If a drop of water is then placed in contact with the bladders, their contents will suddenly escape, retaining for a moment the coiled appearance, but quickly lengthening and partially unrolling.

By means of hairs with which they are furnished, and which at once commence a ceaseless jerking motion, they forthwith launch out into the water, and conduct themselves therein more like creatures endowed with conscious life than mere organs of a settled and sedate member of the vegetable kingdom.

These bodies, drawing near the germ-cells in the course of their travels through the, to them, vast ocean of the water-drop, have been seen arrested in their progress and passing down the

funnel-shafts to the germs below—so fulfilling the purpose for which they were designed and their curious swimming powers were given.

The germs, so fertilized, become the underground stems of which I have yet to speak, putting forth roots and producing the tender, rolled-up buds which finally expand into the fronds whose grace and beauty we so much admire.

These germs, appearing on the prothallium or leaf-like expansion of the spore, are the true representatives of seeds, and the swimming bodies correspond to the pollen or fertilizing dust of flowers.

Thus we see that germs and means of fertilization are produced in the fern as truly as in higher plants, and that the simple agency whereby the one may reach and exert the needful action upon the other, is the *dew-drop* resting on the prothallium from which they are developed. Without the dew-drop or the rain-drop as a means of communication both must perish with their mission unfulfilled. This is, perhaps, one of the most singular instances ever to be found, of the mutual dependency of created things, or, to give different expression to the same idea, of the mode in which each link of the great network of existence is connected with every other.

Returning to the fern, whose "strange eventful history" we have traced so far,—the germ enlarges and becomes what is usually called the root, but is really an underground stem. The true roots are the little fibres—often black and wiry, looking more dead than alive—which descend from this.

The stem may be of two kinds—long, thin, and creeping, as in the common polypody, or short, stout, and upright, as in the common male fern.

At intervals along the creeping stem, or arranged more or less regularly around the crown of the erect stem, little buds appear, which eventually form the fronds which are the really conspicuous portion of the plant, and whose aspect is familiar to us all. The buds present a character of great interest and singularity. Instead of being simply folded together, as leaves generally are,—in all but two of our British kinds the fronds are rolled up after the fashion of a crosier or shepherd's crook. In divided fronds, the sections are rolled up first, and singly, and then the whole are rolled up again, as if forming but a single piece. The aspect of some of these young fronds—in

the common bracken, for instance—with their many divisions all partially unrolled, is often highly curious.

But in this I am proceeding too far. The first crop of fronds, even in those kinds which when mature are most deeply cut, are usually very simple in form—almost or wholly undivided.

This fact is often a source of great confusion to beginners. I well remember two perplexities of the kind in which I was involved during the earlier season of my attention to this subject.

Growing upon a rock by the roadside, I found a small fern, more exquisitely beautiful than any I had seen before. I gathered and preserved it, but for many months was wholly puzzled as to its nature. Fancies arose that I was the happy discoverer of a new species,—and what if Professor Lindley or Sir William Hooker were to name it after me—*Asplenium*, or *Polystichum*, or something else, *Meredithii*? That would be better than a peamage.

These were but fancies, and I was well pleased when further experience—for books helped me not at all—showed that it was a young plant of the common lady-fern. It was divided once only—into simple leaflets—while the fully-developed frond of the matured plant is one of the most highly subdivided our islands can produce.

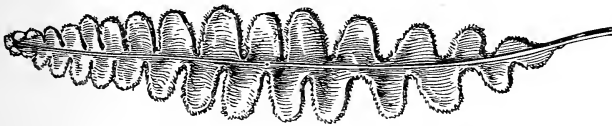
When I began collecting ferns, I had not seen a specimen of the rare holly-fern, and it was pardonable in me on finding some fronds which evidently belonged to the shield-fern genus, and were divided into spiny leaflets only, to refer them to this species and tell a friend that I had made a great discovery. But on going to the same plant a year later, my mistake was made plain, as the new fronds were much more divided, and showed the plant to be of the common kind, the prickly shield-fern.

On the rocky sides of little Welsh and Highland rivers, in glens where the sunlight seldom enters, complete series of this fern in all its stages—from the tiny simple leaf to the deeply-cut and boldly-outlined frond of nearly three feet in length—may easily be obtained, and will beautifully illustrate its varied and increasingly-divided forms.

Some fronds of course, as those of the graceful hart's-tongue, are undivided even at maturity, except in occasional instances in which, like creatures endowed with more sentient

life, they become erratic, and show a disposition to pass beyond the ordinary limitations. Curious examples of tendency to a greater than even their proper large amount of subdivision are occasionally shown in specimens of the lady-fern, which become forked at the extremities not only of the fronds but of the leaflets also.

The manner in which the fronds divide into lobes, segments, leaflets, and so on, is of course largely dependent upon the character of the veining, which differs widely from that of the flowering plants. In these, the veins are either netted or parallel, but in ferns they are forked, each branch again forking, and so on outward to the margin. This is only partially true of the scale-fern, and not true at all of the adder's-tongue; but it is the case with all other of our native kinds.



SCALY SPLEENWORT OR "RUSTY BACK."

Passing now to the production of the spores, and so completing the cycle of a fern's existence,—these appear in cases which spring in some instances from leafless veins or central ribs, but mostly from the veins as they usually occur, and at the back or, in the bristle-fern and filmy-ferns, at the margin of the fronds. The cases grow in clusters which are termed sori, each of which is generally protected by a covering, though in the genus of the polypodies this is entirely absent, the clusters being fully exposed to the diversities of wind and weather. In the protected kinds, the cover assumes various forms. The filmy-ferns have it as a tiny cup, enclosing the spore-cases. In the bladder-fern it is like a fairy helmet. The shield-ferns, as their name implies, produce it as a little shield, fastened by its centre. In the buckler-ferns it is kidney-shaped, in the spleenworts long and narrow, and so on. Some kinds can scarcely be credited with the formation of a real cover, but their sori are protected by the turned-down margins of the fronds. In a few sorts, separate fronds are

provided for the production of the spores, and these mostly differ in shape from the ordinary or barren fronds.

The spore-cases are generally almost microscopic, flask-like in shape, and encircled by an elastic ring of peculiar structure, which passes either from top to bottom like a parallel of longitude, or round the sides like the equator round the earth. The exact nature of this band,—whether its elasticity be due to the mechanical arrangement of its cells, which are narrower on the inner than on the outer side, and apparently filled with solid matter, or to a quality of its substance,—I am unable to determine.



WILSON'S FILMY-FERN.



TUNBRIDGE FILMY-FERN.

When the spores are fully ripe, and ready for dispersion, the band, which has hitherto been bent around them, springs open with great suddenness and force, tearing the enclosing membrane and casting them forth upon the breeze, to undergo in their turn all the changes we have traced, or, as must be the case with multitudes, such are the countless numbers in which they are produced, to perish, humanly speaking, with all the beautiful possibilities of their nature for ever lost.

The botanist is led away from care, not merely into holes and corners—

“Brimful dykes and marshes dank”—

but to glorious vales and to mountain tops, where fresh health-laden breezes play around him, and he can delight in scenes of grandeur and loveliness to a degree which only a true lover of nature knows.

A poet I have read gave sweet expression to thoughts and feelings which I have often shared, when he wrote thus :—

“ Oh ! God be praised for a home
Begirt with beauty rare,
A perfect home, where gentle thoughts
Are trained 'mid scenes so fair ;

“ And where (God grant it so) the heart
That loves a beauteous view,
The while it grows in truth and taste
May grow in goodness too.

“ For 'tis my creed that part to part
So clingeth in the soul,
That whatsoe'er doth better one,
That bettereth the whole.

“ And whoso readeth nature's book,
Widespread throughout the earth,
Will something add unto his love
Of wisdom and of worth.”

Happy are those who can find relief from the worry and turmoil of business in the observation and study of the myriad forms of life which flourish upon the earth, or whose record is laid up within its rocks. But blessed is he who, from the contemplation of objects so varied, wonderful, and beautiful, can with a full heart look upward to a God reconciled in Christ, and in reverential and loving worship exclaim, “My *Father* made them all !”

CHAPTER XXVII.

On the "War-path." — Rabbit-shooting. — Flapper-shooting. — Duck-shooting.— Wood-pigeons.—Life in an Oak-tree.—Burying-beetles.—Lace-wing Fly.—Stag-beetle.—Hair-worm.

It was a curious sight to see the boys on the "war-path." Frank generally led the way, with his eyes fixed on the hedge or tree-tops. Jimmy followed closely at his heels, and Dick brought up the rear. As their eyes were generally too much occupied in looking out for objects of interest, to take care of their feet, they lifted the latter up from the ground with an action like that of a thorough-bred colt, so as to avoid any obstacles in their path. While going along one day in this style, Frank said,

"I tell you what we have nearly forgotten, and that is to go flapper-shooting."

Flappers are young ducks only just able to fly, and in July it is great fun following them along the side of a dyke, the short flights of the young ones making them easy shots for a beginner.

"Let us go to-morrow," said Jimmy.

"You two shoot, and I will look on," said Dick, who cared very little for shooting.

Dick was not by any means an enthusiastic gunner, as the following anecdote will show.

He had taken the gun, saying that he was going to shoot rabbits by the Home Copse, a wood which belonged to Mr. Merivale. In a convenient spot the boys had fixed a hurdle close by a hedge-bank, and twined some brushwood through the bars. Between this and the hedge they used to take their seat, and watch for the rabbits coming out of their burrows in the evening. On a warm July evening Dick went to this spot alone, with a parting injunction from Frank not to shoot at the young ones, but to pick out the old bucks. Frank was busy with something or other, and Jimmy was away at Norwich.

When Frank had finished what he was about he went in search of Dick. When he came to the edge of the field at the foot of which lay the wood, he saw numbers of rabbits skipping about close by Dick's shelter, and after waiting for some time he grew impatient, and wondered why Dick did not fire.

"He must have fallen asleep," he thought; and so with



WILD RABBITS.

infinite care and cunning he crawled down the hedge-side, and came upon Dick from behind.

"Dick, why don't you shoot?" he said in a whisper.

"Hush!" said Dick, "they look so pretty, I don't like to disturb them. Look at the young ones frisking about."

"Give me the gun," said Frank.

Dick passed it to him through the hedge, and Frank, taking aim at two fine rabbits which happened to be in a line, shot them dead.

"I have had more pleasure in watching them than you have had in shooting them, Frank," said Dick.

It must not be thought that Dick was mawkishly sentimental, but he had not the organ of destructiveness that Frank had, and it was, as he said, quite as much sport to him to see and watch birds and animals as to shoot them. Therefore, when the others went flapper-shooting their order of going ranged in this wise :—

Frank, armed with his double-barrelled muzzle-loader (for breech-loaders had not yet come into general use), took one side of the dyke, and Jimmy, with a single-barrel he had bought second-hand, took the other side, while Dick took the punt along the dyke ready to act the part of a retriever.

It was one of those still, hot days when the distant woods lie brooding in a blue haze. The labours of the breeding-season over, the birds were resting silently, and there was no sound but the monotonous hum of insect-life. On the wide marshes all objects were distorted by the quivering of the evaporating moisture, and the long straight dykes and drains gleamed back defiantly at the sun. Frank and Jimmy trudged valiantly through the rustling flags and reeds by the water-side, and Dick pulled the punt along a little behind them.

"Shooting is no fun this weather," said Frank, stopping to wipe the perspiration from his brow.

Just then a wild-duck rose from the reeds, followed by half-a-dozen young ones. They rose on Frank's side of the dyke, so it was his turn to shoot. He dropped his hat and handkerchief and fired, but in his hurry he missed with the first barrel, and Jimmy, fearing they might escape, let off his big single, and one of the young ducks fell to the ground with a flop which told how fat he was. Frank winged another with his second barrel, and it fell into the water, where it was despatched by a third shot from Jimmy, who had hastily loaded. The old duck flew far away, but the young ones only flew short distances, and then settled on the dyke and hid in the reeds, one here and another there ; and then for an hour or so they had good sport beating about the dykes, and flushing them one by one until they had disposed of the whole brood.

"There," said Frank, as he handed the last of them to Dick in the punt, "it is too hot to shoot any more to-day. We have done enough to be able to say that we have been flapper-shooting, and that is all I care for this hot weather."

"I am glad you are leaving off;" said Dick, "that villanous saltpetre smoke hangs in the air so that one can see nothing."

"Then let us have a bathe, and leave the ducks until the winter-time," said Jimmy.

"Yes, but we won't leave them quite yet. We must shoot them when they come to the corn-fields in August."



WOOD-PIGEON.

And as we are now writing about wild-duck shooting we will just advance a short time in our story, and take a glance at the boys shooting wild ducks when the fields are yellow with harvest.

Frank and Jimmy are perched in an oak-tree, which after many years of wrestling with the winds and storms, has assumed a very quaint and picturesque shape. Its mighty stem is riven and has great hollows in it, and its low, wide-spreading branches shade more of the field than the Norfolk farmer likes. It stands in a hedge which separates the corn-field, where the

stems are bowing with the weight of the ears and are ready for the scythe, from a meadow which slopes down to the marsh and the broad.

Frank and Jimmy both have their guns, and Dick has been sent to the other side of the field with an old pistol, which he has been charged to let off.

“Cock your gun, Dick is raising his pistol,” said Frank.

A puff of smoke from out the shadow of the hedge, and a few seconds after, a report, show that Dick has fulfilled his mission; and as the report reaches them, first come a number of wild-pigeons, which fly past with whistling wings. Jimmy fires and brings one to the ground. Frank has reserved his



SUSPENDED LEAF-TENTS.

fire, and wisely, for with slow and heavy flight come four wild ducks right towards the tree. Frank gets two of them in a line and fires his first barrel. Two of them fall, and with his second barrel he wings another, which Jimmy despatches.

“Come back to the tree, Dick,” shouted Frank, and Dick came back. “Now if we wait here a little while, the wild-pigeons will come back, and some more ducks may come from the marsh.” And so, having loaded their guns, they laid them in a hollow and made themselves comfortable, and began to chat.

“Did you ever notice how much insect-life there is in an

oak-tree?" said Dick. "Just watch this branch while I tap it."

He struck the branch as he spoke, and immediately there fell from it scores of caterpillars, which let themselves fall by a silken thread, and descended, some nearly to the ground, others only a little distance.

"I was reading the other day," said Dick, "of the immense quantity of moths which lay their eggs on the oak. There are caterpillars which build little houses of bark to live in. Others roll up the leaves and so make tents for themselves. Others eat the surface of the leaves, and so leave white tracks on their march. Others, when they are frightened, will put themselves into such queer postures: they will stretch themselves out as stiff as a twig, holding on by one end only, and you would think they were twigs; and these, when they walk, loop themselves up. They don't crawl like other caterpillars, but have feet only at each end, and so they loop up their bodies in the middle till they form the letter Ω , and then stretch out their heads again and bring up their tails with another loop. And then there are cannibal caterpillars, which eat other caterpillars. Look at these little spots of bright green. See, if I make them fly, they are seen to be pretty little moths with green wings. They are called the green oak-moth."

"An oak-tree seems to be a regular city," said Frank.

"Look at this marvellously beautiful fly, with lace-like wings," said Jimmy. "What is that?"

"That is a lace-wing fly," answered Dick. "Just put your nose as close as you can to it and smell it."

Jimmy did so, and said,—

"Why it is nearly as bad as a stink-horn fungus."

No more ducks came back that day, but three more wood-pigeons fell victims to their love of corn, and the boys descended, by and by, and walked home.

As they were sitting on a stile, Dick pointed to the carcase of a mole which lay on the path, and to two little black beetles with yellow bands on their wing-cases, which were crawling over it.

"I think those are burying beetles. Let us watch them. They lay their eggs in dead bodies of beasts or birds and then bury them, and the grub of the beetle lives on the carcase in its babyhood."

They lay down on the ground by the beetles, watching them. The process of egg-laying by the female was just about being completed, and the two soon buried themselves in the earth beneath the carcase, and presently appeared at one side with a little mound of earth which they had excavated from under it. This process was repeated again and again, and very slowly the mole began to sink into the ground. The boys watched it for nearly an hour, and in that time the mole was



LACE-WINGED FLY. (Manner of depositing Eggs.)

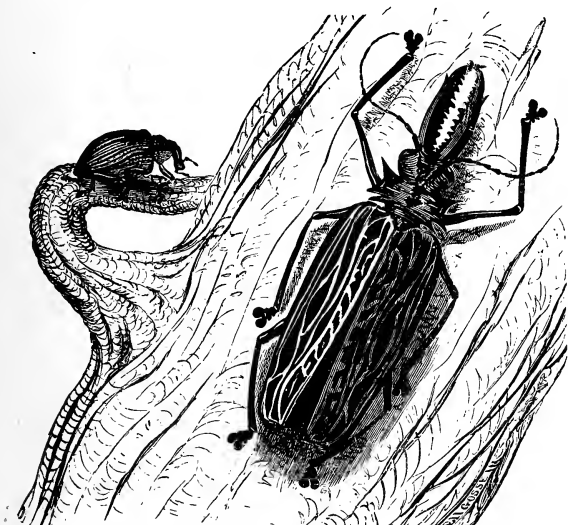
about half-buried. One observer once kept four of these beetles in a place where he could observe them, and supplied them with carcasses of small animals and birds, and in twelve days they had buried no less than fifty!

“Have you ever seen those huge stag-beetles with long horny mandibles like stag’s horns?” said Frank.

“Yes,” replied Dick, “I caught one yesterday, and looked up all about it in my books. Its caterpillar takes four years

to arrive at maturity, and it burrows in the wood of oak and willow trees. I showed the beetle I caught to our housekeeper, and she nearly went into hysterics over it. I tried to make her take it into her hand, and she said she would not have done so for 'worlds untold.'"

Frank stooped down to wash his hands in a small pool of water by the road-side, and he cried—



STAG-HORNED PRIONUS AND DIAMOND BEETLE.

"I say, do look here. Here is a living horsehair. Look at it swimming about. It ties itself into ever so many knots in a minute, and unties them again. Is it a hair-worm?"

"Yes, I have no doubt it is," said Jimmy. "Do you know that I expect that the common notion of eels being bred from horsehairs has arisen from country people seeing these long worms, and thinking they were horsehairs just come to life."

The hair-worm in the first stage of its existence passes its life in the body of some tiny animal or insect. Although it lives afterwards in the water, yet it will, if put into a dry and hot

place, dry up to nothing as it were ; and then after a long exposure to the heat, if it is put into water again, it will swell out and resume its old proportions, and, live seeming none the worse for being baked.

CHAPTER XXVIII.

Purple Emperor. — His Taste for Carrion. — Wood-pecker. — Blue and Small Copper Butterflies. — Buff-tip Moth. — Moths at Ivy. — Strange-looking Caterpillars.

ONE hot August day Frank and his faithful follower Jimmy were strolling arm-in-arm along the lanes to call for Dick. Presently they came upon him engaged in no very pleasant occupation. Holding his nose with one hand, with the other he was drawing along a dead dog by means of a long bramble twisted round it. The dog was highly odoriferous, and Frank and Jimmy kept at a distance while they asked him what he was doing that for.

“I saw a purple emperor butterfly flying round the top of one of the oaks in the park. It is impossible to catch it with a net, but I have read that these butterflies have a taste for carrion, and will come down to it ; so I just fished about until I found this dead dog, which I mean to lay under the tree as a bait.”

“Are you sure it was a purple emperor? They are very rare here,” said Frank.

“Oh yes, I saw the purple of its wings shining in the sun, and it was so large, and it flew about the tops of the oaks, and then flew higher still out of sight.”

The purple emperor is looked upon as the king of English butterflies. It is a large insect, with wings of dark purple bordered with white, which vary in colour like the material known as shot silk, and in the sunlight gleam most beautifully. The males only have this splendid purple gloss on their

wings. The females, though larger in size, have wings of a dull brown. The purple emperor takes its station at the top of the tallest oak and rarely descends to earth. The female is more stay-at-home than the male, and is very rarely caught. The insect would be far oftener seen than caught if it were not for its habit of alighting upon carrion, and collectors take advantage of this low taste, and lie in wait for it, and catch it in the act. The caterpillar is a plump creature, with a tail running to a point, and a pair of horns or tentacles on its head. It is bright green in colour, striped with yellow down each side, and it feeds upon the willow. In the south of England this butterfly is not uncommon, but as you go north it becomes rarer.

Frank and Jimmy accompanied Dick to the park where the oak-trees were, keeping at a respectable distance to windward of him. The carcase was deposited beneath the tree where Dick had seen the purple emperor, and they sat down behind another tree to wait the course of events. Two hours passed away without any sign of the butterfly, but time was no object with the boys, who found it pleasant enough to lie on the cool grass in the shadow of the oaks, and listen to the murmur of woodland sounds. Squirrels and rabbits played about them, and birds fluttered in the trees overhead. The cushat uttered her sleepy moan, and then woke up and flew away on lazy wing to the corn-fields, whence came the sound of the sharpening of scythes. The rattle of the woodpecker tapping the hollow trees was the loudest sound which disturbed the silent, broiling afternoon. The three friends were stretched on the ground talking quietly, and half disposed to doze, every now and then casting glances at the dead dog. Suddenly down a lane of sunlight there fluttered a shimmering purple thing which settled on the carcase, and stayed there, opening and shutting its wings, and sending scintillations of purple light through the green shadows.

"There it is!" said Dick excitedly, and he got hold of his net.

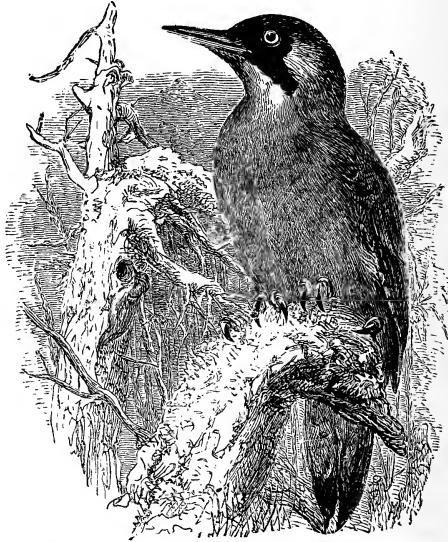
"Don't be in a hurry, Dick; wait until it feels secure and gorges itself a bit," said Frank.

Dick listened to his sound counsel, and waited as patiently as he could for a few minutes, and then he raised his net, and with a single leap reached the spot where the carcase

lay, and brought the net down over dog and butterfly together.

"I have got it!" he exclaimed.

"That's right; and you have got a lot of maggots in your net as well, and stirred up the stench most tremendously. Make haste and kill the butterfly and come away, or you will catch a fever," said Jimmy.

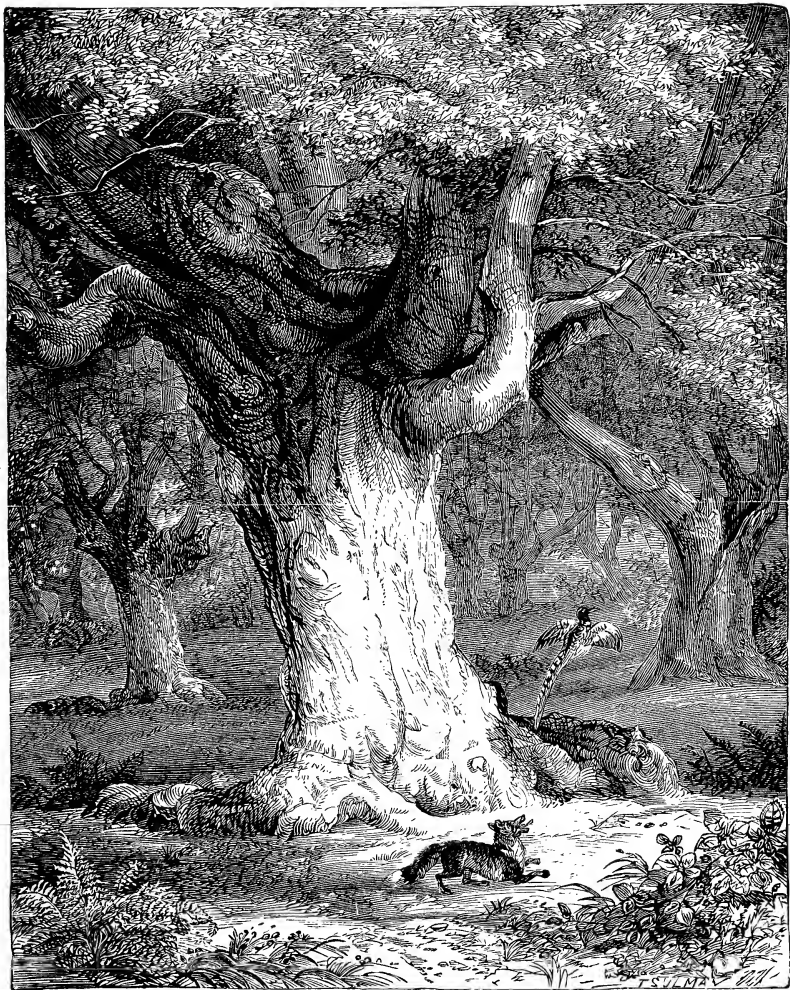


GREEN WOODPECKER.

The gorgeous insect having been secured in Dick's collecting box, they went off in search of other prey. On a common just beside the wood they found abundance of the beautiful blue butterflies, which shone like flakes of summer sky, and also the small copper butterfly, which rivals the most brightly burnished copper in its sheen. These were playing about in the greatest abundance, the small coppers settling on a blue flower, or a blue butterfly on a red flower, forming most artistic contrasts of colour.



BLUE BUT-
TERFLY.



THE HAUNT OF THE PURPLE EMPEROR.

From its throne on the top of a tall nettle, where it sat fanning the air with its black, crimson-barred wings, Dick captured a magnificent red admiral, and shortly after another of the same species. Gorgeous as the upper surface of the wings of this butterfly is, the under side is quite as beautiful in a quieter way, with its delicate tracery of brown and grey.

While Dick was setting the butterfly in his box, Frank leaned against the trunk of an oak-tree, and as he did so he caught sight of a moth which was resting upon it. It was a large thick-bodied moth, and Dick on being appealed to said it must be a buff-tip moth, from the large patches of pale buff colour at the ends of its wings. Frank said,—

“I should not have seen that moth if my face had not almost touched it. Its colour suits the tree-trunk so admirably that it looks just like a piece of the rough bark. I suppose it knows that, and rests on the oak-tree for safety.”

“Yes,” said Dick; “I have read that many moths and butterflies are so like the substances on which they rest by day, that they can scarcely be distinguished from them, and of course there must be a meaning in it. The lappet-moth looks exactly like two or three oak-leaves stuck together, and its wings are folded in a peculiar manner, so as to keep up the delusion. There are caterpillars too which can stiffen themselves and stand out on end, so as to look like sticks.”

“It is the same with birds’ eggs,” said Frank. “Those which are laid on the ground without any attempt at concealment are of such a colour that you can hardly see them. For instance, take a partridge or pheasant. How like their eggs are in colour to the dead leaves of the ditch where they nest. The same with the lapwings, and all the plover tribe. Coots and water-hens’ eggs are so like their nests, that at a little distance you cannot tell whether there are eggs in or not.”

“I wonder,” said Dick, “if birds take any pleasure in the prettiness of their eggs. If so (and I don’t see why they shouldn’t), there is a reason why birds which build in bushes and branches of trees should have pretty coloured eggs, as they have, and why birds which build in dark holes should have white or light-coloured eggs, otherwise they would not see them at all.”

“That is a very ingenious theory, Dick, and it may have something of truth in it,” answered Frank.

That night was a still, warm night, and the moths were out in abundance. As soon as it became dark they all went out with a dark lantern to hunt them, and they were very successful. As they were returning home they passed by an old wall covered with huge masses of ivy. Dick going close to it said,

“Do look here. There are hundreds of tiny sparkles. What can they be? Why, they are the eyes of moths. The ivy is covered with the moths, feeding on the flowers. Look how their eyes gleam.” And truly it was a marvellous sight. When they turned the light of their lantern on them they saw that the moths were busy with a curious silent activity, flying from flower to flower, sipping their sweets.

“There are so many that I hardly know how to set about catching them,” said Dick. “Many of these must be rare and many common.”

“Sweep the face of the ivy all over with your net as rapidly as you can, and keep them in your net until we get home, and then we can kill and pick out all that you want,” counselled Frank.

Dick followed his advice, and with a dozen rapid sweeps of his net he seemed to have filled it. Closing the net by turning the gauze over the ring, they walked quickly back to the boat-house, and carefully closing the door and window, they opened the net and let them all out into the room, and then caught them singly. In a couple of hours they found that they had secured about fifty specimens, comprising twenty different species.

During the summer a strange creature which fed on the potato plants had much frightened the country people, who thought it a sign of a coming plague. It was a large caterpillar, of a lemon-yellow colour, with seven slanting violet stripes on each side and a horn on its tail. The people in the neighbourhood of Hickling, knowing that Frank and his companions were fond of collecting such things, brought some to them, and by this means they became possessed of more than thirty specimens. They were the larvæ of the death's-head moth, the largest of all our British moths. It is remarkable not only for its size, but for two other things, each of which is very curious. On its thorax it has a perfect delineation in white of a skull, or death's head, with a pair of cross-bones below it. In addition to this singular mark, it—and it alone of all our moths and butterflies—has the power of making a squeaking noise,

which it does when it is touched or annoyed. How it makes this noise no one seems to know. At least there are so many conflicting opinions that the matter may be said to be still in doubt.

The boys fed the larvæ on potato-leaves put in a box in which there was placed about six inches of earth. When the larvæ had finished their eating, they dived into this earth and turned into the pupæ state. In the autumn the perfect moths came out, but only about half of the number reached the final stage. The others died in the pupæ state. However, Dick had plenty of specimens for his cabinet and for exchange.

CHAPTER XXIX.

How to Attract Perch.—Perch-fishing.—Pike.—Good Sport.—Plaster Casts.—Model Eggs.

“I SAY,” said Frank, “you remember when the minnows ran at the caddis-worms in their transparent cases, but could not eat them?”

“Yes.”

“And you know what shoals of perch there are about the broad, and how difficult it is to drop upon them, because the water is so shallow and clear?”

“Yes.”

“Then what would you say to putting a quantity of minnows in glass bottles, and sinking them in the broad, in a good place, for two or three days? I think a lot of perch would collect together and prowl about trying to get at them, and then we could go and catch any quantity of them, live baiting with minnows.”

This project was agreed to unanimously, and after a day or two, the boys were busily engaged in collecting wide glass bottles, or wide-mouthed jars, and in fishing for minnows, of

which they got a considerable number by diverting the current of a brook, and baling the water out of a pool in it.

They had managed to obtain about a dozen large glass bottles or jars. They filled these with water and put a number of minnows in each, and then corked them up, making holes through the corks to admit fresh water and air to the prisoners. These bottles and jars were conveyed to a spot where perch were in the habit of congregating,—near an island of reeds, where the water was about five feet deep, with a fine gravelly bottom such as perch delight in. The large shoals of perch which roamed about the broad were very often to be met with here, and it was a favourite fishing place of the boys.

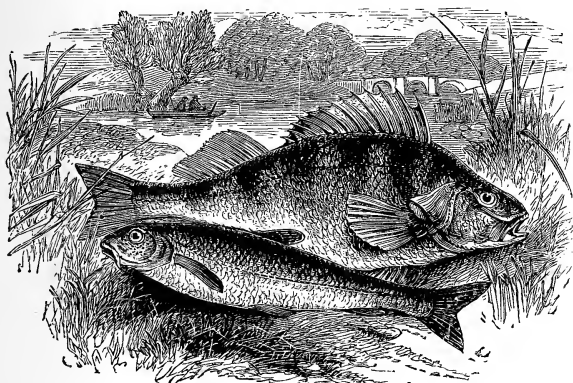
One Friday night they took the yacht to this spot and moored her there in a convenient position, sinking the bottles and jars from six to twelve feet distance from her, so as just to be within easy reach of their rods. Leaving the yacht there they rowed back in the punt. The yacht was pleasanter to fish from than a small boat, and they took her there overnight to avoid making a disturbance in the morning.

On the Saturday morning they rowed to the spot in the punt, armed with their rods and bait-cans filled with minnows. Getting quietly on board the yacht, so as to avoid any concussion of the water, they peered into the clear depths. Two of the jars were easily to be seen, and round each of them was a circle of perch, or rather several circles, for next to the jar were some very large ones with their noses placed against the glass. Behind these large perch were others, in circles of gradually lessening size, until they came to the very small ones, which were there, not so much attracted by the minnows as hanging on of necessity to the tails of their elders.

The boys laughed quietly to each other at the success of their experiment. They had certainly succeeded in drawing the fish together.

Dick was the first ready. He had baited his hook with a live minnow, the hook being run through the skin of its back near the back-fin. As the minnow sank through the water, and before the float touched the surface, there was a general rush of the perch up towards it. Dick pulled his bait out of the way of some small ones which were rushing at it, and then the largest of the shoal, a patriarch of about four pounds in weight, came hurtling at it, dashing the others to right and left of him.

The poor minnow made a futile attempt to escape the wide open jaws, but it was of no use, and they closed upon it and the hook together. Dick struck and hooked the perch, which immediately made a spirited rush straight away. On being hooked it had blown the minnow out of its mouth, and it was eagerly snapped up by another perch. Dick's perch fought very gamely, and Frank and Jimmy forbore to put their lines in until it was secured, for fear of fouling. After a very sharp struggle Dick drew the perch within reach of a landing-net, which Frank slipped under it and lifted it out. It was a beauty, in splendid condition, its black bars being strongly marked across its golden scales.



PERCH AND GUDGEON.

Frank and Jimmy now put their lines in, while Dick was rebaiting. In less time than you can say "Jack Robinson" they each had a fish on, both of them good ones. And now the sport was fast and furious. As fast as they put in they had a bite, the perch even following their struggling companions to the top of the water as they were being drawn out. The very large ones soon grew wary, but the smaller ones, fellows of about half to three-quarters of a pound, seemed not to have the slightest shyness, and rushed to their fate with the greatest eagerness. The floats lay for a very short time on the water

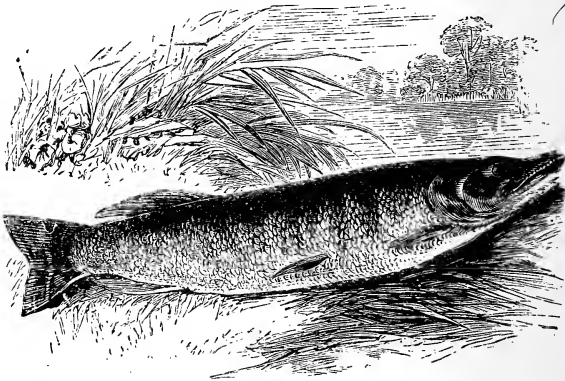
before they went under with that quick dash which characterizes a perch's bite.

"Here's a gudgeon in the bait-can," said Jimmy. "I will put it on my hook and try for a big one. It may be tempting."

He did so and threw it in. Immediately the float went under water with such swiftness that he knew he had hold of a big one and he struck, to find his rod bending double and his line running rapidly off the reel with the rush of a large fish.

"You have got a big one," said Frank. "Let him have line."

Jimmy did so, until the line was nearly off the reel, and then he was compelled to give him the butt. The line stood the



PIKE

strain, and the fish was turned and came back slowly and sullenly, while Jimmy wound in his line. The fish allowed himself to be drawn up close to the yacht, and they saw it was a large pike, and then it went off again. This time the rush was not so long or strong, and after two or three rushes of lessening power, the pike was drawn within reach. Frank unscrewed the net and fixed the gaff-head on the stick, hooked Mr. Pike through, and hauled him in. It weighed nine pounds. Jimmy was proud of having conquered it with a light rod and line not very well adapted for pike-fishing.

Towards noon the wind began to rise, and as the clearness

of the water was then destroyed by the ripple, the big perch lost their caution in consequence. The small ones now left off biting, possibly beginning to see that it was not a profitable occupation. Presently the sport altogether grew slack, and as it was then three o'clock, and the boys had been too busy to eat anything, they left off for lunch. After lunch Frank said,—

“I am sated with slaughter; and as there is such a nice breeze, let us sail about the broad.”

“Frank would give up anything for sailing,” said Dick laughing, as he put away his tackle.

I forget how many fish they really got that day, but I know that both number and weight were very great indeed.

They took up the jars and bottles the next morning when the water was clear and still, and released the prisoners which had done them such good service.

It was worth while preserving a memento of a four-pound perch, and as it was a pity to spoil it for eating by skinning, it was resolved to make a plaster-cast of it, and this was done in the following manner:—

They bought some plaster-of-paris and mixed it with water until it became a thin paste. This they poured into a box, and when it began to set they laid the fish on its side in it, so that exactly one half of it was covered by the plaster. The fish had first been well oiled, so that the scales should not adhere to the mould. When the plaster was set and hard the fish was taken carefully out. Several holes about an inch deep were then bored in the plaster round the imprint of the fish. The plaster-cast was then well oiled, the fish laid in it, and more plaster poured in, until the fish was covered. When this in its turn had become hard it was taken off, and both sides of the fish were now represented in the mould. The holes which had been bored in the first mould, now had corresponding projections in the second mould. This was to insure accuracy of fit when the pieces were put together for the final cast. A hole was then bored through one side of the mould. The interior of it was well oiled, the pieces fitted together, and liquid plaster poured in through the hole. In a couple of hours the moulds were separated, and a perfect cast of the fish was the result. This Mary painted in water-colour to imitate the natural fish, and the final result was very creditable to all concerned.

While upon the subject of plaster casts, I must mention an occupation which the boys resorted to in the winter-time. Their collection of birds' eggs was almost as perfect as they could hope to make it for many years to come, but at Frank's suggestion they added to it, for additional perfection, a representation of the egg of every British bird. They made these eggs of plaster and coloured them very carefully, and varnished them with white of egg. These artificial eggs could not have been distinguished from real ones as they lay in the cabinet, but each egg was marked with a label, signifying that it was only a model. I recommend this plan to all students of ornithology.

CHAPTER XXX.

Eel-fishing.—Setting the Nets.—Elvers.—The Merivale Float.

ONE autumn day, when the ground was red with fallen leaves and the landscape was sodden with wet, the boys were busy in the boat-house with some of their numerous occupations, when the conversation turned upon eels and eel-fishing,—how that eels bred in the sea, and in the spring myriads of tiny eels came up the rivers; when the river was wide, ascending it in two columns, one by each bank, so thick together that you might scoop them out in bucketfuls,—and how, when they met with any obstruction, such as a weir or flood-gate, they will wriggle themselves over it; and it often happens that where it is dry they stick fast to it, and their companions make their way over them, and leave them to perish. In the autumn, too, the eels migrate to the sea in vast numbers, and are caught by means of nets placed across the river. Jimmy said,—

“I say, Frank, do you remember all those eel-nets we saw by Horning? They will be in full work now. I vote we sail down next Friday night and see them in operation.”

"Very well," said Frank, "I don't think we could do better. We will get a half-holiday on Friday, so as to be there in good time."

Friday was wet and stormy, and the boys consulted as to the advisability of going. Frank said,—

"Let us go, as we have fixed to go. It may clear up, and if it does not, it doesn't much matter. We are used to getting wet, and it won't hurt us."

The others agreed; so taking in all the reefs in their sails, they started across the broad, while the wind howled, and the rain beat with blinding force against their faces. The sky was murky with driving masses of black cloud, and the lake was lashed into angry waves.

"This is a nice sort of day for a pleasure excursion," said Dick, as he placed his hat more firmly upon his head and turned his back to the wind.

"Yes," said Frank. "Do you go into the cabin. I can manage the tiller and mizen, [and Jimmy will take his turn at the main-sheet, and then you can have a spell by and by."

"Oh no, I am not going to shirk it," replied Dick.

They struggled across the broad, and into the Hundred Stream, and before very long they reached its junction with the Bure, and brought up under the lee of a sort of rough cabin which was built there. There was a bare spot among the reeds and there, upon a wooden framework, hung the eel-nets, which two or three men were busy putting in order. When the yacht was made snug, Frank went up to them and said,—

"We have come, hoping you will let us see how the eel-nets are worked; but I am afraid we have chosen a very bad night."

"No, you have come the very best night you could have picked, sir," answered one of the men. "There is no moon, and the water is rising. The eels always run more freely when the night is dark and stormy."

"Oh, then we are in luck's way after all," said Frank to his companions.

"We shall be setting the nets directly, sir, and you had better come with us in your punt."

"All right, we will."

The eel-nets were like huge bags, large at one end, and narrowing rapidly. The mesh at the large end was about two inches in diameter, but it quickly lessened until it was so small that a minnow could not have got through it. The mouth of the net was made sufficiently wide to stretch across the river, and, in order to keep the body of it distended, wooden hoops were placed at intervals down it. To each hoop inside the net was attached an inner circle of net, which narrowed to a small opening, like the principle on which some mouse-traps are constructed, so that the eels having passed through the narrow inlet could not find the way back again. The end portion of the net, comprising the last four hoops, is made in a separate piece or pocket, and is only fastened to the net when it is fishing. The juncture is marked with a rope and buoy.

The men now fastened a heavy chain along one half of the lower side of the mouth of the net. This was the side which was to lie along the bottom of the river, and the chain was to keep it down. The net was now taken on board the boat, and the men rowed a little way down the river, followed by the crew of the *Swan*. The net was put out so that the base rested on the bottom. Heavy weights were fixed at the two bottom corners of the net, and the two top corners were tied to posts fixed by the side of the river. The men now sounded with a pole, to see that the chain lay across along the bottom. While they did so the boat heeled over so much that Dick said,—

“Another inch and the stream would be over the gunwale, and those fellows would be pitched into the net and drowned.”

The net was now pulled out far down the river, and the pocket tied on, and then it was left to itself.

“Don’t the wherries ever do any damage to the nets?” asked Jimmy.

“Sometimes, sir; but they know where they are set, and they takes care where they put their quants if they be quanting; and if they be sailing they pass over the nets without doing them any harm.”

After this they set another net lower down, and then they returned to the hut, and, sitting by the peat fire, they had some hot tea, and waited for an hour, knowing that the eels were rushing down stream, and into the nets.

The wind howled dismally over the marshes, and the rain hissed on the water.

"It's lonesome work, sir," said one of the men to Frank, who had drawn nearer the fire with a shudder.

"Yes ; does it pay ?"

"Pretty well at times, sir. This is what we should call a very fine night for our work, as the eels run so much better than they do on a calm night. It will make some pounds difference to us."

"What do you do with the eels ?"

"Some we sells at Norwich and Yarmouth, but the most part goes to London or Birmingham. The Black Country men are very fond of a nice rich eel ; but come, sir, it is time to take up the first net now."

They went down the black river again, until they came to the buoy which marked the pocket, or "cod," as it is technically termed, of the net. This was hauled up and detached from the rest of the net. It was very heavy and full of eels, which were wriggling about in a black slimy mass. They put the mouth of the cod over a basket which was smaller at the top than at the bottom, so that the eels could not crawl out, and poured them into it.

There were about thirty pounds weight of eels, the major part being about a pound weight each, but some were two or three pounds in weight. The cod was then tied on to the net again and lowered, and the next net was visited in the same way, and found to contain about the same quantity of eels.

The nets were first laid about seven o'clock, and first taken up about eight, and at intervals of an hour through the night the nets were visited, and about the same quantity of eels taken from them each time. This lasted up to half-past one o'clock, and then there was a great falling off.

"They have pretty well stopped coming down now, sir. We can leave the nets and go and have some sleep. The nets will hold all the eels which will get into them by the morning."

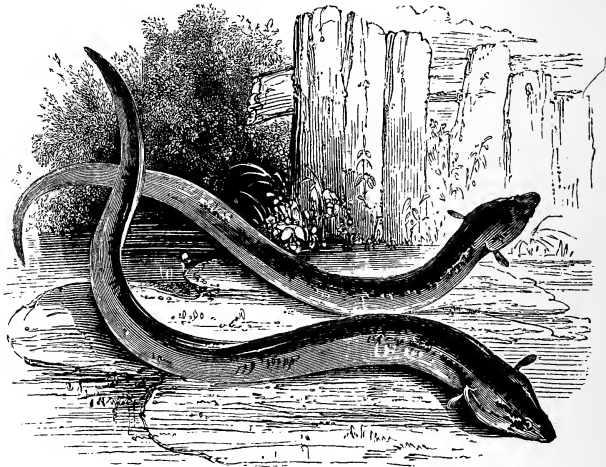
"Did you ever meet with any accident while eel-fishing ?" asked Dick.

"I have only seen one, sir ; but that was a bad one. It was the year before last, and my mate had had a drop too much, and he overbalanced himself and fell overboard into the net, and the stream carried him down it before I could catch hold of him. There was no one to help me, and before I could get the heavy net ashore he was dead. It was a fearful thing, and

I have thought of it many a time since. I used to be fond of a glass myself at that time, but I have never touched a drop since."

"Did you ever see the little eels coming up the river in the spring?" asked Jimmy, to change the subject.

"Oh, you mean the elvers. Ay, and more's the pity! the people catch tons of them to feed the pigs with. If they would let them alone, they would be worth a good many pounds to some one in the autumn," answered the man.



EELS.

"If the eels breed in the sea, Frank," said Dick, "what do the eels do which cannot get to the sea,—those which live in ponds?"

"Make the best of it, I suppose, like sensible beings," answered Frank.

"Do you often have such a good night as this?" asked Jimmy.

"No, not very often. You see, we want so many things together—wind, rain, rising water, and no moon."

After the morning dawned the nets were taken up for the

day. Besides eels they contained a quantity of miscellaneous matter, such as a dead dog, sticks, weeds, old boots, a bottle or two, and various other refuse which the stream had brought down.

The eels had been put overnight in the well of the boat, and now the men proceeded to sort them, separating the big ones (for which they received a larger price) from the small ones.

In order to do this they constantly dipped their hands in sand, for the eels were slippery customers.

The rain had ceased, but the day was dull and dreary, and the *Swan* sailed home early, her crew satisfied with the glimpse they had had of how eels were caught for profit.

In the afternoon they sailed about the broad in order to try a new float which Frank had invented for pike-fishing. They had been accustomed to trail their spinning baits after the yacht as they sailed about, but the wake left by the yacht generally disturbed the fish, so that they had to let out a very long line before they could catch anything, and the line then became fouled in the weeds. Now Frank had invented a float which did away with this drawback. You may have noticed how, when towing a boat with the tow-rope fastened a few feet from the bows, she will sheer out from you. It occurred to Frank to adapt the same principle to a float, so he cut a piece of deal a quarter of an inch thick, eight inches long, and four wide, pointed at both ends. To one side of this he attached a keel four inches deep, leaded along the bottom. This side was painted green, and the other white. To a point about one-third of the way from one end of this float was attached a rough line. To the other was fastened a shorter length of line with a spinning trace attached. When this float was laid in the water with the keel-side undermost, and set in motion, it sheered out, and as the yacht sailed along and the reel line was payed out, the float swam along in a parallel course with the yacht, and as far out as they chose to let out line. It then passed over undisturbed water, and a great change was soon observed in the increased number of pike taken by the help of this float. They christened it the "Merivale float," and they were so pleased with its success as to have a dim idea of taking out a patent for it.

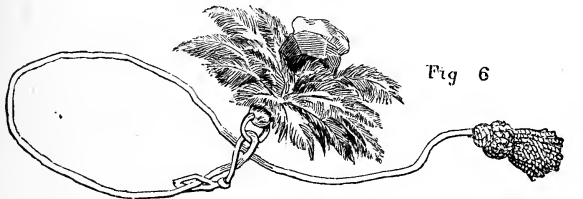
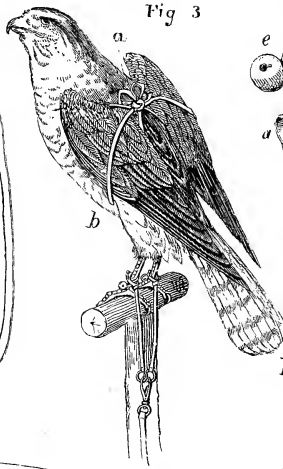
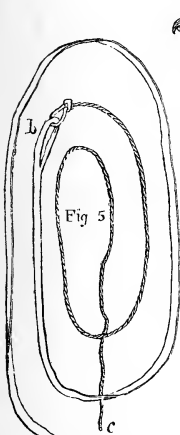
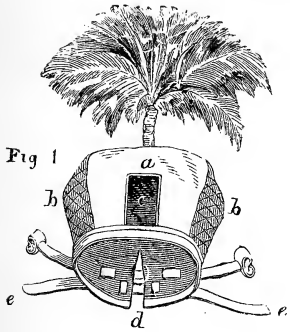
CHAPTER XXXI.

Hawking.

THE training of the hawks was a source of great amusement to the boys. They obtained Stonehenge's *British Rural Sports* from Sir Richard Carleton's library, and studied the article on hawking. They found a sparrow-hawk was called a short-winged hawk, because its wings do not reach so far as the end of its tail, while a kestrel is a long-winged hawk, its wings reaching as far as the end of its tail. As a general rule, long-winged hawks are much better than short-winged ones for hawking purposes, but the sparrow-hawk is braver and better than the kestrel. Their hawks being from the nest, and not caught by a trap, were *eyasses*. Before they could fly they were *branchers*, and being reared at liberty they were *hack-hawks*. The training of a hawk is called its *reclaiming*, Fig. 3 *a* and *b*, when it sleeps it *jouks*, its prey is its *quarry*, when it strikes it is said to *bind*. When it soars and then descends upon its quarry it *swoops*, when it flies straight after it it *rakes*. It is sent off by a *whistle*, and brought back by a *lure*.

These are only a few of the technical terms peculiar to hawking.

The hood, Fig. 1 and 2, which one sees so conspicuously on the heads of hawks in pictures of the sport in the olden time is not necessary in the case of the short-winged hawks, and the great object was to make the hawks as tame as possible. This the boys accomplished by continually handling them and being with them, especially at feeding-time. Around each foot of the bird they tied a soft strap of leather to correspond to a *jesse*, Fig. 4 *a b*. To these were attached some little bells *ee*, which they took off some children's toys. The jesses had also a loop *b*, to which was fastened when required a *leash*, Fig. 5, or long cord, which prevented the birds from flying



APPARATUS USED IN HAWKING.

away while training. They had perches with cross-bars made for the hawks, and set up at one end of the boat-house, and underneath it a tray containing a quantity of sand and a bowl of water. In a couple of months the hawks were quite tame, and then the boys proceeded to train them for sport. Every time they were fed the meat was attached to a lure, Fig. 6, which was a lump of cork with a bunch of cock's feathers attached to it. This was thrown up into the air at gradually increasing distances, and at the same time one of the boys, having the hawk ready perched on his wrist (which was protected by strong gloves such as hedgers and ditchers use), let her loose with a shrill whistle, and she was allowed to fly the length of her leash and seize the lure and the food. In a remarkably short time the birds would not only fly to the lure with alacrity, but wait until the boys came up and took them away again. When they had attained this pitch of perfection the rest was easy, and the leash was dispensed with. Then a dead bird or rabbit was fixed to the lure, and at last, one fine October day, it was resolved to try the hawks at real game.

"What shall we try them at first?" said Dick.

"I was thinking that the best way would be to take the yacht and coast about the reeds, and try them first at the water-hens and coots. I am so afraid of someone shooting them if we take them into the meadows. If we cannot manage them with the yacht on the water, we will take them on the drained marshes," answered Frank.

"I hope they will not disappoint us," said Jimmy, "for they have given us a great deal of trouble to train."

"They have had very little to eat this morning, so I think they will fly at anything we show them, but it will be a sell if we lose them the very first try."

There was just a light breeze on the broad, which enabled them to sail quietly about. Frank took the helm, for sailing was to him the greatest of all enjoyments, and Dick and Jimmy stood in the bows, Dick with a hawk on his wrist, ready to be flown as soon as they caught sight of anything worth flying at. Frank steered the *Swan* so that she just brushed along the reeds, which were brown and dry, and had thinned fast under the keen October breezes.

"There is a water-hen in the reeds, just before us," said Jimmy. "Drive the yacht a little further in."

Frank did so, and the water-hen flew out over the broad, her legs dipping in the water.

"Let her have a little law," cried Frank. "Now then!"

With a loud whistle Dick let the hawk slip. She rose rapidly in the air, over the water-hen, and then swooped. The water-hen instantly dived. The disappointed hawk curved up again, just touching the surface of the water with her breast. She rose about twenty feet in the air and swooped around in small circles, her head turning this side and that, watching for her quarry. The course of the water-hen under water was marked by a line of bubbles, and Frank kept close behind her, letting the wind out of his sails in order not to overtake her and so cause her to double back. Soon she rose again to the surface, but ere the hawk, quick as she was, could reach her, she had dived again. In this manner, the water-hen rising to the surface to breathe and the hawk swooping unsuccessfully, they ran across the broad to a reed-bed, where the pursued bird remained under water so long that they knew she was holding on to the weed by her claws, with only her beak above water, as is the habit of these birds. After a little searching about they saw her yellow beak protruding above a mass of weeds. Seeing that she was discovered, she flew up uttering a despairing croak. Down came the sparrow-hawk with lightning swiftness, and struck her in the air, and they both fell into the reeds. The boys forced their way to them and the hawk allowed Dick to approach and take her in his hand. He cut off the head of the water-hen, and gave it to her to eat in the cabin, while they brought the other hawk for the next flight.

"Well," said Frank, "that was as successful a flight as we could desire. There goes a water-rail. Let the hawk go."

With a sharp scream the hawk dashed off in pursuit of it, and without troubling itself to soar, it struck the water-rail, and, bearing it away in its talons, it flew off to a dyke where a wherry was moored, her crew having gone ashore, and perched on the top of the mast, where it began to pick at and tear the bird.

"What's to be done now?" said Jimmy.

"We must try the lure," answered Frank, and taking it up he whistled and threw it in the air. The hawk dropped the water-rail and flew down to the lure and suffered herself to be taken. As a reward, she was allowed to have its head, and the other hawk was again taken out.

"There is a coot swimming along yonder. Let her fly at it," cried Jimmy.

As the hawk launched into the air, however, a sandpiper flew out from among the reeds, and the hawk instantly followed it. It was a very pretty sight to see the twistings and turnings of the two birds as they dashed across the broad with equal speed. Frank took a pull at the sheet so as to catch the wind, and followed them as fast as he could. The hawk had risen above the sandpiper, and was about to swoop down upon it, when the latter, to the surprise of the boys, dashed into the water and dived.

"Only fancy a bird with no webs to its feet diving," said Frank.

The sandpiper remained under water some time, and when it arose, which it did with great apparent ease, the sail of the yacht hid it from the hawk's sight, and it flew away unmolested. As they sailed along on the look-out for other prey, the hawk hung in the air above them, and followed, or, as it is technically called, "waited on," them in the most beautiful manner.

The birds on the broad now seemed to be aware that a hawk was about, and kept close to the shelter of the reeds, so that the broad seemed quite deserted. At last, however, a coot swam out, and the hawk made a feint at it but did not strike it, and the coot swam coolly away.

"Why the hawk is a coward," said Jimmy.

"No, she is only cautious. You see, if she were to strike it on the water it would dive, and as it is a strong bird it would carry her under. That is the difficulty we shall meet with if we hawk on the water," said Frank, "and if we go on the land someone is sure to shoot the hawks."

They called the hawk in by means of the lure, and sailed up a dyke, meaning to land and try the marshes and the low drained ground in their vicinity. They landed, and, Dick taking one hawk and Frank the other, they proceeded along a narrow drain in the hope of flushing some more water-hens.

"Quick," cried Frank, "and crouch down behind these reeds. I can see a couple of wild-ducks coming towards us."

They threw themselves on the ground, and soon the whirring of wings in the air told them that the ducks were coming straight towards them. On they came, within ten feet of the

ground, and when they perceived the boys they turned off at a tangent with a loud quack. Both hawks were let go, and rising well in the air, one of them made a swoop on the hindmost duck and struck it, but did not lay hold. The duck swerved under the blow, but held on its course. Then while the one hawk mounted, the other, in its turn, swooped and struck the duck, so that it fell nearly to the ground. The boys ran along after the hawks and their quarry, and shouted to encourage the former. Then both hawks made a simultaneous swoop, and struck the duck to the ground.

As the hawks were taken from the duck, they showed some impatience and signs of anger, so Frank said,—

“I say, they have done enough for to-day. We had better feed them, and tie them up.”

They accordingly gave them the head of the duck and the entrails of all the birds they had killed, and put them in the cabin, and then commenced to fish for pike. In the course of the day they caught seven, none of them over six pounds in weight; and then, when the western sky was agleam with the pink and green of sunset, they ran the yacht into the reeds while they put up their tackle. The wind had fallen to the faintest of zephyrs, which was only indicated by sudden shoots of light across the broad. The air was still, with a mellow October stillness, and flocks of starlings were wheeling in the air with unbroken regularity of rank and file, now on edge and nearly invisible; and then broadside on, and seeming as if suddenly nearer; and then settling in the reeds, where during the night they roost in vast numbers.

The boys stood there talking until the gloaming was spreading rapidly over the broad, and then they made preparations for going.

They had not secured the hawks, and the cabin-door had swung open.

“There goes one of our hawks,” cried Jimmy, as it floated out with a triumphant scream over the marsh.

“Quick! get out the lure!” said Frank.

But the lure was not needed. A twittering commenced among the reeds, and grew louder and more clamorous; and soon, with a noise like thunder, a crowd of starlings rose from their resting-places, and after a preliminary circle in the air they closed upon the hawk and began to mob her, screaming

the while most vociferously. The hawk struck three of them down in succession, but her assailants were too many for her, and she turned tail and flew back to the yacht, where she allowed Frank to capture her, while the starlings whirled away and settled in the reeds once more.

As they sailed back, Frank said,—

“Now that our hawks are trained so beautifully we shall have good sport with them.”

But he was doomed to be disappointed. Two days after they took them into the open country, and a rabbit darting out of a tuft of grass, they flew one of the hawks at it. It struck the rabbit, and clung to it while it ran into its burrow, and the noble bird was killed by the shock. The boys were very much grieved at this, and resolved not to fly the other hawk at four-footed game. While they were crossing Sir Richard Carleton's land they flushed a solitary partridge, which appeared to have been wounded, and flew slowly. It had doubtless been left behind by its more active companions. They let the hawk fly, and it followed the partridge around the corner of a plantation. The report of a gun followed, and, running up, they found their worst apprehensions realized. The hawk had been shot dead by one of two gentlemen, who, with a couple of dogs, were out shooting. They were guests of Sir Richard's, and when they found the hawk was a tame one they were very profuse in their apologies. The boys did not care to make very civil replies, but walked quietly and sadly away.

Their cup of bitterness was for the time full.

“So ends our hawking,” said Frank as they separated.

“Yes; this is the unluckiest day we have had yet,” answered Jimmy.

CHAPTER XXXII.

Heron.—Hawking.—Great Bustard.—Stock-dove in Rabbit-hole.—
“Dowe” Dogs.—Search for Bustards’ Eggs.

THE boys were to see a little more hawking. One of the gentlemen who shot their hawk was kind enough to give them an invitation to spend a few days at his house near Thetford, with the promise that he would show them some hawking carried on in the good old fashion, and with splendid hawks brought from Iceland. A neighbour of his cultivated hawking, and spared no expense in the noble pastime.

The boys debated some time whether they should accept this invitation or not. Frank was still sore about the loss of his hawks, and hardly cared to see others more successful than himself, but Dick said,—

“Don’t be selfish, Frank. When you see the sport you will forget all about our loss ; and besides, the invitation is meant kindly, and we ought not to refuse it out of pique.”

Frank saw the wisdom of this, and so one fine November day they found themselves in company with their host, walking across the immense tract of common, or warren, which lies between Thetford and Brandon. They were on their way to “the meet.” On a knoll where a single fir-tree raised its red stem in the wintry sunlight were assembled a number of ladies and gentlemen, some on horseback, and some on foot. Two men came up bearing square frames on which were the hawks, large falcons, which had been brought at great expense from Holland and Iceland. They were hooded, and the hoods were gaily decorated with tassels and feathers.

“What are they going to fly the hawks at?” asked Dick. “They won’t waste the energy of such magnificent birds as those on rabbits and plovers, and I see nothing else about.”

“They expect some herons will pass over on their way from their feeding-grounds to the heronry,” said Frank.

Presently the company moved forwards, as a speck on the distant horizon told of the probable approach of their quarry. As it came nearer it proved to be a heron, and its flight was directed straight towards them, and at no great distance from the ground. When the advancing bird came within one hundred yards of the group, it seemed to think there might be



COMMON HERON.

some danger awaiting it, and it swerved aside continuing its course so as to pass them on one side. Two of the hawks were unhooded, and the noble birds, catching sight of their quarry, launched into the air in pursuit of it. When the heron saw the hawks it uttered a cry, and immediately rose in the air and soared to a great height. The meaning of this

was apparent when the hawks, instead of attacking it on a level with themselves, circled up with great swiftness, and tried to rise above the heron, so that they might swoop down upon it. The heron rose with outstretched neck, and wings which moved with great swiftness, in spite of their size ; but the hawks still soared and soared in wide circles, and the party below rode and ran keeping as nearly as possible under the birds. The hawks had now risen above the heron, but still they went on circling higher and higher, until they were mere specks in the sky. Then they suddenly grew large as they swooped down, and the heron gave another cry, and half turned on his back as they struck him almost simultaneously, and hawks and heron fluttered down a struggling mass to the ground. The hawks were taken off and hooded, and after a short interval another heron came in sight, and the other two hawks were flown at it.

When the sport was over, Frank got hold of one of the warreners who had come to see it and asked him if he had ever seen any great bustards about the warren, or the adjacent fens.

“Oh, ay, sir, when I was a lad many and many a one have I seen, but now I have not seen one for more than three years. They be almost killed out of the land now. One is to be seen every two or three years, but it is always shot or trapped.”

“What sort of a bird is a great bustard?” asked Dick.

“It is a game bird as large as a full-sized turkey, and far better eating. There used to be droves of them on the fens and the warrens, but they were shot and trapped right and left. I mind when I was a boy I have seen as many as twenty together on a warren, and then the warreners used to set a battery of guns, and have a long string fastened to all the triggers. Maybe the string was half a mile long, and then the men at work on the warrens, or the marshes, had orders to pull the string when they saw the bustards within reach of the guns. They used to stalk them by walking on the off-side of a horse, and, keeping it between them and the bustards, walk round and round until they came within shot.”

The warrener was a very intelligent man, and he told them much about the habits of this noble bird, which is now nearly extinct in England.

“Have you ever found its nest?” asked Jimmy.

“Yes, when I was a lad I found two or three. The eggs were good eating, so we took them, and as they were big eggs and laid on the ground, it was easy enough to find their nests if you knew where to look.”

“I suppose you haven’t got any of their eggs now?” said Frank.

“No, sir, I haven’t; but I have a notion that two or three



GREAT BUSTARD.

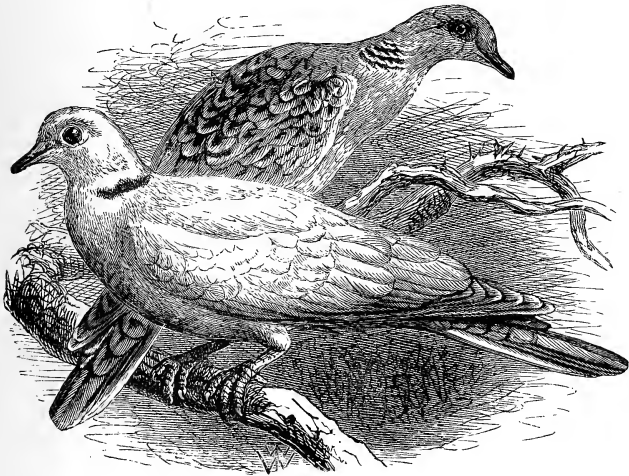
years ago I saw two or three of their eggs in a cottage somewhere over yonder.”

He pointed to the western sky, but to the boys’ eyes no cottages were visible; and upon their asking him for further information, he told them that beyond a ridge of trees which crested a warren were some half-dozen cottages, and he thought it was in one of those that he had seen bustards’ eggs, but he was not at all sure.

“What is the meaning of this?” asked Dick, pointing to the mouth of a rabbit-hole which was barred in with sticks like a cage. Inside the sticks were the feathers and part of the skeleton of a stock-dove.

The warrener replied,—

“The doves breed in the rabbit-holes, and we warreners keep a ‘dowe’ dog, which will tell us at once what holes have nests in them; and then, when the young ones are almost ready to fly, we fasten them in the burrow with sticks, just like that, and the



DOVES.

old ones feed the young ones through the bars, and when the young ones are fit to eat we kill them. I suppose the man who fastened that burrow in forgot where it was, or the young one died before it was worth eating.”

The boys now had to go back with their host, who, by the way, made them so comfortable that they forgave him for shooting their hawk.

The next day found the boys approaching the cottages where the warrener told them the bustards’ eggs might be found.

“Now,” said Frank, as they stopped under the lee of the

wood, "let us have a consultation. How had we better go to work? If we show them that we have come specially for the eggs they will ask too great a price for them. I vote we go and ask for a drink of water, and then praise the children, if any, and so get into conversation; and then ask in an incidental way about the bustards."

This seemed the proper way of going to work, so they appointed Frank spokesman, and then marched up to the nearest cottage. A woman opened the door to them, and peeping in, they saw behind her half-a-dozen children, all young.

"Can you give us a drink of water, ma'am?" said Frank, in his politest tone.

"Oh yes, sir," answered the woman with a curtsy. "Won't you step indoors. But wouldn't you like a cup of milk better than water?"

"Thank you, very much," replied Frank. "But what nice little children you have got," and he patted one on the head.

"Lovely," said Jimmy enthusiastically, and picking out the cleanest he kissed it.

"Well, sir," answered the woman with a smile, "they be as healthy as most, and as fine I dare say, but they are a great deal of trouble."

"Ah, I have no doubt they are," replied Frank sympathizingly; and as he spoke his eyes were wandering about, looking at the ornaments on the chimney-piece to see if any eggs were there; but nothing of the kind was to be seen.

"This is a fine open country, ma'am."

"It is that, sir," she said.

"And plenty of rabbits and plovers about."

"There are that, sir."

"Have you ever seen any bustards about?"

"No, I have heard tell of them, but it was before my time."

"And I suppose you have never seen any nests or eggs?"

"No, sir, never; but my little boy has some throstle's eggs, if so be as you would like to have them."

"No, thank you," said Frank; and thanking her for the milk, and bestowing a small coin on one of the children, the boys made their exit.

"It is your turn to do the next kissing, Dick," said Jimmy.

"All right," replied Dick cheerfully.

The cottages lay at some little distance apart, and they visited them all in turn, but with the like ill success. Then, as they were thinking of giving it up as a bad job, they espied another small cottage in a little hollow, by a well.

"Let us try this, for the last one," said Frank.

"Very well," said Jimmy "but pray, don't ask for any more to drink. I have the best intentions in the world, but I really cannot find room for any more."

Beside the cottage was a silvery-haired old man, mending a broken paling. Frank went straight at it this time.

"Good morning."

"Good morning, sir," replied the man, touching his hat.

"Have you ever seen any bustards' eggs?"

"Yes, sir, I have two in the house. Would you like to see them?"

"We should."

"Then step in, sirs. I can give 'ee a glass of good nettle beer."

Jimmy groaned inwardly at the mention of the beer, but the sight of the eggs upheld him.

"Here they be, sir," said the old man, taking down two brown eggs with rusty spots on them, off the chimney-piece. "I took them myself out of the nest in yon fen when I was a lad."

"Will you sell them?"

"Ay, sure. It be a wonder how they come not to be broken, for I have taken no particular heed of them."

"What will you take for them?"

"What you likes to give, sir."

"I would rather you would fix your own price."

"Well, then, if you give me a shilling, I shall be fain."

"No, no, they are worth more than a shilling. We cannot afford to give you what you would get in London for them, and it is only fair to tell you so, but we will give you half-a-crown apiece for them."

"I shall be very glad to have that much for them, sir, if you think they are worth it to you."

So the bargain was concluded, and the boys became the happy possessors of these rare eggs.

I have just been reading, in the *Field* a very interesting

account of the appearance of a great bustard in Norfolk. A gentleman there was told by one of his men that he had seen a "wonderful cur'us bird like a pelican," in a wild part of the fen. The gentleman at once went to look at it, and being a naturalist, he was much delighted to find that it was a bustard, and observation through a telescope told him that it was a cock bird. He gave strict orders that it was not to be shot, and that any prowling gunner found on his land was to be consigned without ceremony to the bottom of the nearest dyke. Then he sent for well-known naturalists from Cambridge and elsewhere, to come and watch the motions of the bird. It was feeding in a lonely part of the fen, in a patch of cole seed, and, each man being armed with a telescope of some sort or other, they had good views of it, both flying and walking. The news soon spread among the naturalists of the county, and one of them, who had some tame bustards in confinement, generously offered to give one of them to be let loose to pair with the wild cock. A female bustard was accordingly turned out into the fen as near to the wild bird as they dared to venture without frightening him away, and after a short time, they had the pleasure of seeing the two walking about together. In a day or two more the hen was found dead in a dyke. Her wings having been clipped she could not fly far enough. Another female was procured, but while seeking for an opportunity of turning it out where the wild one could see it, the wild one flew away. It was heard of afterwards in a different part of the county, and it does not appear yet to have been killed, and the landowners have given orders that it shall not be destroyed. I am looking forward with interest for further accounts of it.

CHAPTER XXXIII.

Water-hen Swallowed by Pike.—Casting Net.—Trapping Water-hen for Bait.—A Monster Pike.

FRANK and Jimmy were punting through one of the reedy pools adjoining the broad, shooting wild-fowl, and had not been very successful, so they were disposed to shoot coots and water-hens, as well as ducks. They saw a water-hen swimming across a small pool into which they had just pushed their way, and Jimmy raised his gun to fire at it, but before he could pull the trigger there was an immense splash and swirl in the water, and the water-hen disappeared down the jaws of an immense pike. The boys stared in amazement.

“That fellow must have been forty pounds in weight at the least,” said Frank, as soon as he had recovered himself.

“Let us row home at once and get our tackle, and fish for him.”

They rowed quickly back, and upon reaching the boat-house they found that Dick was there, and had just put the finishing touch to a casting-net which they had been occupied in making for some time.

“Bravo! that is capital!” said Frank. “We can now catch some bait with it.”

Before casting the net into the water they practised some time with it, for it is very difficult to throw a casting-net properly. After a little practice the boys were able to throw the net so that it described something like a circle on the ground, and then they took it to the shallow parts of the broad, and in a dozen throws they obtained a quantity of small roach and bream, as well as some large ones. Putting some of the roach into a bait-can, they rowed to the pool where the big pike lay, and first of all tried him with a live bait. But the float was undisturbed, save by the movements of the bait. Then they tried trolling with a dead gorge-bait, then spinning, and then a spoon, but with the like ill success.

"I tell you what," said Frank, at length, "a big fish like that requires something out of the common to induce him to bite. Let us put a big bream on, and try and tempt him by size. So they put a bream a pound and a half in weight on the gorge-hook, and worked the heavy bait up and down every part of the pool, but still without success, and the autumn night came on and put a stop to their fishing.

"We must catch him somehow," said Frank.

"Let us set trimmers for him," suggested Jimmy in despair.

"No, no ; we will catch him by fair means if we can."

The big pike, the biggest which they had ever seen, occupied their thoughts all that evening. As Frank was dressing the next morning a happy thought occurred to him, and when he met his friends after breakfast he said,—

"I have got an idea how we may catch that pike. You remember how he took the water-hen under? He decidedly prefers flesh to fish. What do you say to catching a water-hen and baiting our hook with it?"

"The very thing," said Jimmy.

"But how are we to catch the water-hen?" asked Dick.

"I don't quite know. We must get it alive, you see."

They talked it over, but could not hit upon any plan of capturing one alive, so at luncheon-time they went to Bell, and asked him if he could help them.

"Well, sirs, the water-hens come to my back garden to feed with the hens and sparrows. If you could lay some sort of a trap for them like a riddle-trap for sparrows it would be an easy matter to entice one into it."

"The very thing," said Jimmy. "We will put the casting-net round a wooden hoop and prop it up on a stick, and put bread-crumbs under it."

So the casting-net was called into requisition, and a trap was constructed, and set in Bell's back yard, which was close to a dyke leading to the broad. The boys hid themselves in an outhouse, having a long string fastened to the stick which supported the net at an angle of forty degrees. First the hens came under it and then the sparrows, and the two began to eat up all the bread put there. At last a water-hen was seen swimming across the dyke, and with slow and cautious steps creeping up the bank towards the net. Frank took the end of the string in his hand, and peeped cautiously through a chink in the door

while the others looked through a little window. The water-hen fed for some time on the outskirts of the throng of hens and sparrows, and at last ventured within the circle of the net.

"Now," said Dick.

"No, wait until it is further under," said Jimmy.

Frank waited until the bird was fairly under the net, and then pulled the string. The trap descended upon three hens, half-a-dozen sparrows, and the water-hen.

"Hurrah!" cried the boys, rushing out. It was a matter of some difficulty to secure the bird they wanted from among the struggling mass of hens and sparrows, but they did so at last without hurting any of the others, and at once pinioned it by cutting off its wing-feathers.

The next morning as soon as it was light they rowed to the place where the big pike lay. Everything was very still and quiet, and shrouded in a light grey mist, as they pushed their way along a narrow channel to the pool. They had brought with them their strongest rod and their stoutest line, and they carefully tried every knot and fastening of their tackle before commencing to fish. The next most important thing was to bait the water-hen or arm her with hooks properly. This was done by tying a number of hooks lightly to her with thread, and ruffling the feathers so as to conceal them.

"Poor thing," said Dick, as Frank took up the rod and swung her into the pool.

By keeping a slight pull on the line the bird was induced to turn in the opposite direction, and to swim towards the middle of the pool.

"Another minute or two will show if our plan is successful," said Frank, "and if not, the bird shall be let loose."

"I don't feel much faith in it now," said Jimmy.

When the bird reached the centre of the pool she dived.

"Oh dear, I did not expect that," said Frank. "What shall we do now?"

"She must come up again presently. The pool is twelve feet deep, and she cannot cling to the bottom."

"I felt her give such a pull just now. She is struggling hard to escape," said Frank, who was still letting out line.

Two or three minutes passed away, and still the bird did not make her appearance.

"Pull in the line a bit, Frank."

Frank did so, and said,—

“She must be clinging to the bottom. I cannot move her,” and he pulled a little harder.

“I say,” he cried, “I felt such a sharp tug. I do believe the big pike has got hold of her.”

“Nonsense!” said the others.

“But it isn’t nonsense,” said Frank, and he held the rod bent so that they could see the top twitching violently.

“It is the pike!” Frank exclaimed excitedly, and he immediately let the line run loose, so that the pike might have room to gorge his prey.

“He must have seized the water-hen as she dived,” said Dick.

“Yes, and won’t we give him plenty of time to gorge. I don’t want to miss him now we have got such a chance,” said Frank.

And in spite of their impatience they gave the pike half-an-hour to swallow the bird, and then, at the end of that time, there were sundry twitchings of the point of the rod, and the line was taken out by jerks of a foot or two at a time.

“He is moving about,” said Jimmy. “It is time to strike.”

Frank raised his rod amid a hush of expectation. As the line tightened he struck lightly, and immediately the rod bent double with a mighty rush from the pike as he went straight across the little pool, which was about thirty yards in diameter. After this first rush the pike began to swim slowly about, keeping deep down and never showing himself. Round and round and across the pool he swam, now resting for a few minutes like a log, and from a twitching of the line apparently giving angry shakes of his head. Frank kept a steady, even strain upon him, and as the space was so circumscribed there was no danger of a breakage by any sudden rush.

This sort of thing went on for half-an-hour, the line slowly cutting through the still, dark water; and Jimmy and Dick urged Frank to pull harder, and make the fish show himself. But Frank was too wise to give way, and he still kept on in a steady, cautious fashion.

“If we go on much longer we shall be late for Mr. Meredith,” said Dick.

“Never mind,” replied Frank, “he will forgive us on such an occasion as this.”

“Here he comes,” shouted Frank, as he wound in his line.

The pike came rolling up to the surface a few yards from the boat, and they caught sight of him. His proportions were gigantic, and his fierce eyes glared savagely at them. He gave a flounder on the top of the water, then sank down again into the depths.

“What a monster!”

In a few minutes the pike came up again, and this time more on his side, and plainly much exhausted. Three times more did he thus rise and sink again, and each time he seemed more helpless. The fourth time he remained on the surface lying on his side. Dick got hold of the gaff and held it in the water with outstretched arm, while Frank slowly drew the conquered giant towards it. Dick put the gaff under him and sharply drove it into his side, and then Jimmy and he uniting their forces, hauled the pike into the punt, almost upsetting it in their eagerness, and then threw themselves on the fish to prevent it flopping out again.

They rowed home in great triumph, and on weighing the pike it was found to be $34\frac{1}{4}$ lbs. in weight, and the largest which had been caught in Hickling Broad for many years. The time it took to land it from the time it was struck was fifty-five minutes.

CHAPTER XXXIV.

Fishing on Stilts.—A Capsize.—Wild-fowl-Shooting.—A Flare-up.

DECEMBER was ushered in with a week of storm and wet, and as the boys were shut out from outdoor pursuits they had more leisure for indoor studies; and one day a bright idea occurred to Jimmy, by the carrying out of which he said he could fish the broad without the trouble of rowing a boat. So on a Saturday afternoon, when the clouds had broken, and the rain ceased, and the still water reflected the pale blue of the December sky, Frank and Dick sat at the boat-house window watching Jimmy put his plan into execution.

He had turned a couple of leaping-poles into stilts. His feet rested upon foot-rests, but were not fastened to them,

so that if he fell into the water his feet would be free and he could keep himself right-end uppermost; but the crutches of the stilts which came up under his arms were lightly tied around his shoulders, to leave his arms at liberty to use a rod. And now, having been fairly started by the aid of his friends, he was stalking along like a huge heron in about five feet of water, and was spinning for pike, casting his bait to right and left of him and oftentimes behind him,—for his movements were rather uncertain and erratic; and as making a cast disturbed his equilibrium, he was obliged to execute a sort of waltz-step to recover himself. Frank and Dick were in ecstasies of laughter at his involuntary antics.

“He will never catch any fish in that way,” observed Dick.

In a little while, however, they saw his rod bend double, and it was evident that a good-sized pike had seized his bait. Then Jimmy made a stumble, and a violent effort to recover himself, and in so doing turned his back to the pike, which resented the insult by making a savage rush, pulling Jimmy backwards.

There was a violent sort of war-dance on Jimmy’s part, during which one of the stilts seemed to be pointing upwards, and then Jimmy, with a last wild flourish of a stilt in the air, descended from his lofty height and disappeared beneath the waters of the broad.

Frank and Dick hastened, as fast as their laughter would allow them, to the punt, and rowed to meet Jimmy, who was half wading half swimming towards them, the two long stilts trailing behind him from his shoulders, and his rod following Mr. Pike on a different course.

“Swim after your rod, Jimmy,” cried Frank.

“Whoo, hoo! it is so cold,” spluttered Jimmy.

He scrambled into the punt, and, just staying to recover the rod, and with it a pike of about six pounds in weight, they rowed back, and Jimmy ran home to change.

Frank afterwards said to Jimmy,—

“That stilt dodge of yours is a capital idea. You see you caught a pike directly with it. Won’t you try it again?”

“No, thank you,” said Jimmy, “once ducked, twice shy.”

After a few days’ fine weather a hard frost and deep snow set in. A stiff breeze prevented the broad from being frozen

over, and swept the snow into drifts wherever there was anything to arrest its progress. When the snow had ceased, the wind and frost still continued, and wild-fowl in large numbers visited the broad. Dick did not care sufficiently about the shooting to make him willing to face the cold ; but Jimmy and Frank had capital sport among the wild-ducks. They killed the greatest number when the ducks took their morning or evening flight across a reedy spit of land which ran out into the broad. Here the boys had sunk a large cask in the earth, and when they were both hidden in this, packed in with dry straw and a retriever with them, they were warm and comfortable. The whistle of wings cleaving the air, or a cry of wild-fowl in the starlit silence of the night, would arouse them, and, with their heads peering over the top of the cask, they had their guns in readiness to salute the dark objects passing over with a shower of shot.

In the morning the retriever searched for and picked up the dead birds, and the young gunners finished off the wounded. For four successive nights they enjoyed good sport in this manner, and then it was put an end to by a singular accident. Frank lit a match to see what time it was, and a lighted splinter fell among the dry straw, which instantly blazed up.

“ Look out for the powder !” shouted Frank ; and he and Jimmy and the dog scrambled out of the cask pell-mell, tumbling over each other in their eagerness to be away from the dangerous proximity of the fire. Frank had the powder-flask in his pocket, and fortunately no fire came near it. The boys too escaped without injury, except that their hair was pretty well singed by the rapid rise of the flame. The retriever was so frightened that he turned tail and bolted, never stopping until he reached his kennel.

“ This is a pretty go,” exclaimed Jimmy, as with their guns under their arms they watched the tall, roaring column of flame and smoke which ascended from the burning tub.

“ The people all about will wonder what it is. What a pity we have nothing to hold water in, so that we could try and put it out ! The tub has caught, and will be burnt up.”

The sound of oars was now audible across the water, and presently Dick’s voice shouted,—

“ What’s the matter ? Are you all right ? ” and a boat was run ashore, and Dick and Mary, well wrapped up, stepped out.

Dick had been spending the evening at Mr. Merivale's, and just as he was leaving the house, the bright tongue of flame on the opposite side of the broad alarmed him, and Mary insisted upon coming with him to see what mischief her brother had been perpetrating.

They rowed back, followed by the fitful glare of the fire, which shone in their eddying wake, amid the clamour of wild-fowl startled into flight by the unusual apparition. Then as Mary was silently admiring the strange weird scene, there was a blinding flash, followed by two loud reports, which made her start and scream, and then two splashes in the water, as two ducks out of a number which had been passing over the boats fell to the aim of Frank and Jimmy.

CHAPTER XXXV.

Punt-shooting on Breydon.—A Narrow Escape.

THE Christmas holidays had commenced for the boys. Frank had a consultation with Bell, which ended in Bell's borrowing a duck-shooting punt from a neighbour, and Dick's looking up the big duck-gun from his father's lumber-room. The punt was a flat-bottomed one, pointed at both ends and covered fore and aft, so as to form two watertight compartments. In the bows was a rest for the gun to lie upon. As the gun took a pound of shot at a load, Frank was rather nervous about firing it off, for the recoil, if not broken by mechanical appliances, would have dislocated his shoulder. So he bought some india-rubber door-springs, and with them constructed an apparatus to take off the recoil of the gun, and, lest it should by any chance hit his shoulder, he got Mary to make a stout cushion, which he fixed to the butt.

Reports came that Breydon Water was swarming with wild-

fowl, so, taking Bell with them as a guide and instructor, and with the shooting-punt in tow instead of their own, they set sail for Yarmouth, and sailing up Breydon Water they moored the yacht by the Berney Arms, a public-house situate where the Yare debouches into Breydon.

As the night fell they could see and hear wild-fowl of various kinds flying to and settling on the muds. Dick preferred staying on board the yacht, for his frame was not yet so inured to winter cold as it had been to summer heat, and the other two, with Bell, set out in the punt about eight o'clock. They rowed down Breydon Water with the last of the ebb, and then floated and paddled up again as the tide rose. Bell crouched in the stern and worked the two short paddles by which the punt was propelled when approaching the birds. Frank lay in the bows, with the big gun in position in front of him, and Jimmy cuddled up in the middle, armed with Frank's light double-barrel, ready to knock over any of the wounded birds which might try to escape. The night was rather light with the brightness from the stars, which shone resplendently from the deep, dark blue, and in the east the moon lifted a faint curved horn above the trees.

"There are a lot of birds on that mud-bank ; I can hear them quite plainly," whispered Frank to Bell.

"Hush ! Don't you speak or fire until I whistle, and then pull the trigger ; but have the gun ready covering the birds. They are too scattered now. Wait until the tide rises a little higher, and covers most part of the bank, and then they will huddle together, when you will kill twice as many."

They waited for a quarter of an hour, gradually drawing nearer the birds, which were now collected together on a large dark patch on the mud which was still uncovered by the rippling waves. Frank had his eye on them, the gun covering them and his finger on the trigger, waiting breathlessly for the signal.

A low whistle sounded behind him. A sudden silence took the place of the chattering and gobbling sounds which had before proceeded from the birds. Frank pressed the trigger. The mighty gun flashed forth its deadly contents with a tremendous roar, and Frank found himself hurled back upon Jimmy. He had incautiously put his shoulder to the gun. He was not hurt, however, for the cushion had saved his shoulder. The birds which were unhurt swept away with a



WILD DUCK SHOOTING.

great clamour, but the mud was covered with dead and dying. Two of the winged ones were swimming away, when Jimmy fired and killed them. They landed on the mud, taking care to put on the mud-boards. They picked up the dead ones, and had many a lively chase after the wounded ones on the mud and in the shallow water. They recovered five-and-twenty birds. Half of them were wild-ducks, and the rest dunlins and other shore birds.

They passed on up Breydon, but they could not get another shot of such magnitude. Another punt was on the water, and the noise of its firing and oars disturbed the birds, so that they were difficult to approach. They got, however, two more long shots, and killed six ducks at one and three at another.

The tide had now covered most of the flats, and the birds had either left the water or were floating on the surface, and could not easily be seen because of the waves. Bell then said he knew of a spot where the mud had been artificially raised, so as to form a sort of island, for the express purpose of enticing the wild-fowl to gather on it as the tide rose. He therefore paddled them towards it. Some clouds had obscured much of the starlight, and the night was darker. Frank became aware of one dark patch on the water in front of them, and another to the left. He thought they were both flocks of birds, and selected the left hand one, as being the nearer. He covered it with his gun, and waited somewhat impatiently for Bell to give the signal.

"Surely we are near enough;" he thought, when Jimmy crept up behind him and whispered, "Bell says that is another punt, they must be making for the mud we are, that patch in front."

"By Jove," exclaimed Frank, "I was aiming at the boat, and about to fire. Perhaps they are aiming at us."

"Don't shoot," cried out Bell to the other boat, and Frank immediately twisted his gun around and fired at the birds which rose from the mud-bank.

"I say, you there!" cried out a man in the other boat, "that was a narrow escape for you. I was on the point of firing at you. You should give me half the birds you shot then."

"All right, you shall have them, if you will help to pick them up," sang out Frank. Only a dozen, half of them dunlins, were secured and divided.

“That was a danger in punt-shooting which I hadn’t foreseen,” said Frank to the stranger. “It was a close shave for you as well as for us. Will you come on board our yacht and have some supper?”

The stranger assented, and proved to be a sporting lawyer from Yarmouth, and a very pleasant fellow.

CHAPTER XXXVI.

Drifted to Sea.—A Perilous Position.—Rescue.

THE next day Bell went off to Yarmouth to sell some of the fowl in the market, and unfortunately got fuddled, so that when the evening came he was unable to accompany the shooters. Frank and Jimmy resolved to go out by themselves. Making a mistake as to the time of the tide, they found themselves carried swiftly down Breydon Water on a tide which had yet four hours to ebb. The night was clear, cold, and starlit, with a stinging north-easter sweeping over the broad water, and whisking the snow on the land into fantastic drifts. The new moon had not yet risen, but every star was blazing brightly, and glimmering reflections shone in the water. As they listened they found that the night was full of strange noises, of quackings and whistlings, and that the air was cleft by the sweep of wings. It was a night of nights for a wild-fowl shooter, and the boys resolved to stop at Yarmouth until the tide turned. As they neared the twinkling lights of the town a flock of wild geese took wing, out of shot, and made for the estuary.

“Oh, do let us follow them, they are sure to alight before they reach the bar,” said Frank.

“Very well; but we must take care not to drift out to sea.”

“There is no danger of that, we can always run ashore.”

So they passed by the quays and fish-wharves, and one by one

the lights opened out, and passed behind them, resolving themselves into a cluster in the distance. Ghostly vessels lifted their tall spars against the sky, the water became more 'lumpy,' and prudence suggested that they should turn back; but the love of sport urged them on, and triumphed. Further still: yet the geese were nowhere to be seen, and not very far off was the white water on the bar. They were fast drifting out to sea, and thought it time to turn. They did so, but could make no headway against the wind and tide, and the shores were so white with surf that it would have been folly to have attempted to land.

"I say, Frank, we've done it now," said Jimmy, as they drifted nearer and nearer to the bar.

"Don't be alarmed: we are all right," said Frank,—but privately he thought they were in a very awkward fix. All the outward-bound vessels, which, had it been earlier, might have picked them up, had left at the commencement of the ebb. The punt was now in the midst of the rougher waves which broke over the banks of sand at the mouth of the estuary, and they were expecting every moment to be swamped, when Frank uttered a cry of joy, and seizing the paddle, made for a black spot which was dancing about in the foam. It was a buoy, and Jimmy seized the 'painter,' and stood up. As they neared it, a wave bore them on its summit within reach. Jimmy succeeded in slipping the rope through the ring on the top of the buoy, and in another moment they had swung under its lee. They were now safe from drifting farther out to sea, but in imminent danger of being swamped, and the time seemed very long while waiting for the tide to turn. The curling waves continually broke over them, and had it not been for the decked portions of the punt they would have been sunk by the first two or three duckings. As it was, they were kept hard at work baling with a tin scoop belonging to the punt, and fending off from the buoy.

Forwards and backwards, up and down and sideways, they were tossed. A great black wall of water, with a thin crest through which the glimmer of a star could occasionally be seen, would come surging along, making their hearts sink with apprehension, and then would sometimes break and die away close by, sometimes dash them against the buoy, and sometimes with a side chop nearly fill the punt. There was a dash of

excitement about it all which made it not absolutely unpleasant, as long as the sky remained clear and they could see the stars, which seemed to laugh at their puny battle with the elements. But by and by the stars began to disappear in the direction of the wind, and finally were blotted out over the whole heavens by a huge pall of cloud, and the darkness became awfully oppressive. The wind dropped, and its roar subsided into a low moaning sound. They felt the cold intensely as the snow came down quickly and silently, covering them with a white coating. A black cormorant suddenly appeared hovering over them, to be driven away with the paddle, and they could hear the swoop of gulls about them.

"We are not quite food for the birds yet ; but I can't stand this much longer," said Jimmy, his teeth chattering with the cold.

"Hold up, old man. The tide will turn in half an hour."

There was the sound of a sudden snap. The rope had parted, and a receding wave bore them away, leaving a rapidly widening distance between them and the buoy.

"Keep her head to the waves," said Frank, "or we shall be upset."

At this critical moment the sky cleared in one patch, and against it they saw the outlines of the dark, square sails of a schooner. The boys hailed her long and loud, and in answer came the hoarse cry, "Where away?"

"Here, on your weather bow. Fling us a rope!"

In a few minutes they and their punt were safe on board, and in another hour they were in an hotel at Yarmouth, dressed in borrowed suits of clothes, and enjoying a hot supper.

After this, and when their own clothes were dried by the kitchen fire, they walked back to the Berney Arms by road, reached the yacht about three o'clock in the morning, to the great relief of Dick, who had been very anxious at their protracted absence.

The next day they sailed down to Yarmouth in the *Swan*, picked up the punt, and went up the Bure with sheets eased out and a following wind.

CHAPTER XXXVII.

The Broad Frozen.—Skating.—Fish Frozen in Ice.—Birds Frozen to the Ice.—Ice-Ships.

It was dark when they sailed up the dyke leading to the broad, and the wind had fallen, so that their progress was slow. As they moved out of the dyke, where there was a gentle current, into the open broad, there was a sound of crashing and splintering at their bows, and the way of the yacht was stopped. Jimmy and Dick rushed out of the cabin, where they had been preparing supper, and said to Frank, who was at the helm,—

“What is the matter?”

“Why the broad is frozen over, and we can't get any further.”

“Can't we break a passage through?” said Dick.

“We might, but it would be a pity to spoil so much ice for skating. Let us stay here until the morning, and then we can walk across for our skates. The yacht will be as safe here as by the boat-house.”

They were already sufficiently wedged in by the ice to be able to dispense with the lowering of their anchor, and after supper—which by the way consisted of, first broiled bacon, next tinned salmon, then some gooseberry-jam, followed by cheese, and finally a tin of American preserved strawberries, which they had bought at Yarmouth, the whole washed down by coffee and beer—they turned in for a snooze. The silence of the night was broken by continual sharp, tinkling noises. It was some little time before they discovered that these arose from the ice crystals as they formed along the surface of the water, shooting out in long needles and crossing each other, until every inch of the water was covered.

In the morning the ice was strong enough to bear their weight, although it bent in long waves beneath them as they hurried over it.

The frost continued. The ice was smooth, and black, and

hard, and perfectly free from snow. Early and late, the boys sped lightly over it on their skates, enjoying to the full this most invigorating and healthy exercise.

Frank and Jimmy practised threes and eights and the spread-eagle, and the other now old-fashioned figures, with great assiduity; and Dick, having soon mastered the inside edge, tumbled about most indefatigably in his efforts to master the outside edge.

The frost continued with unabated severity, and soon the ice was two feet thick, and the shallower portions of the broad were frozen to the bottom. One day Dick was skating at a good pace before the wind, when something beneath his feet in the transparent ice attracted his attention, and in his haste to stop he came down very heavily. He shouted to Frank and Jimmy to come up, and when they did so, he pointed to the ice at his feet. Midway in the water, where it was about two feet deep, was a shoal of a dozen perch, most of them good sized ones, frozen into the ice in various attitudes, betokening their last struggle to escape. The reason of their being so caught was explained by the fact that they were in a slight depression surrounded by shallower and weedy water, which had frozen so as to shut them in, and give them no means of escape before the water in which they swam became solid.

"That fellow is fully two pounds weight. I wonder if they are dead," said Frank.

"Of course they must be," answered Jimmy; "they cannot be frozen stiff like that and live."

"I am not so sure about that," observed Dick; "caterpillars have been known to be frozen quite stiff, and to all appearance lifeless, yet they revive when they are warmed."

"Well," said Frank, "I tell you what we will do. We will dig them out, and put them into water in the house, and give them a chance."

They did so, and five of the perch, including the biggest and the smallest, came to life, and were subsequently restored to the broad.

One day a rapid thaw set in, and the ice was covered with a thin layer of water. During the night, however, the wind suddenly changed, and this layer of water froze so quickly, that it held fast by the feet many water-fowl which had been resting on the ice.

When the boys went down to the ice in the morning, they saw here and there a dead or dying water-hen or coot thus made captive, and surrounded by a group of the hooded crows, those grey-backed crows which in the winter-time are so common in Norfolk, and the rapacious birds were attacking and eating the poor held-fast water-fowl.

The crowning achievement of the winter was this: They broke the *Swan* free, and got her on to the ice; then they supported her on some runners, like large skate irons, made by the village blacksmith, and put on ordinary skates on each rudder to get steerage power, and so constructed with great ease an ice-ship after the fashion of those used in some parts of Canada. With this they sped over the ice at a far quicker rate than they had ever sailed upon the water, and they could steer her tolerably close to the wind. This amusement superseded the skating until the ice melted away, and the *Swan* once more floated on the water and sailed in her legitimate manner.

CHAPTER XXXVIII.

The Thaw.—Cromer.—Prehistoric Remains.

THE thaw was accompanied by torrents of rain for more than a week. At the end of that time the boys were sitting in the boat-house making up their Note-book, when Mr. Meredith entered and said to them,—

“Will you drive with me to Cromer? I hear that a large portion of the cliff has fallen away and exposed a bed containing the bones and remains of prehistoric elephants and other mammalia, and all the geologists of the country are going there. I thought we might as well see these wonderful relics of the past. What do you say?”

“We should like it above all things,” said Frank for the others; and Mr. Merivale’s horses were forthwith harnessed to

the waggonette, and they started. The rain had ceased, and a cold, white sun shone out of a white space in the leaden sky.

The town of Cromer is the easternmost part of England, and it is built on the summit of a gravel-hill, which the sidelong sweeping tides eat away little by little and year by year. It is said that the church of old Cromer lies buried under the sea half a mile from the present shore. Immediately in front of the village the cliff is plated and faced with flints and protected by breakwaters, but on either side the soft earth is loosened by the frosts and rains, and undermined by the tidal currents, which, running nearly north and south, sweep the débris away instead of piling it at the foot of the cliff.

Putting the horses up at the principal inn, they walked to the cliff below the lighthouse, where a portion of the high cliff had slid into the sea. In one place a recent storm had swept the fallen mass of gravel away and exposed at the bottom a portion of the "forest bed." Here three or four gentlemen, presumably geologists, were freely engaged in poking and digging. One man was tugging hard at a huge bone which projected out of the cliff; another was carefully unveiling the stump of a fossil tree. Here and there were the stumps of trees—oaks and firs, and others, with their spreading roots intact, just as ages ago they had stood and flourished; and between these ancient stumps were the bones and the teeth of elephant, hippopotamus, and rhinoceros, deer of ten different sorts, bears, tigers, and many another animal, the like, or the prototype of which, are now found in tropical regions alone. The boys were very much struck with the sight of these remains of the animals which lived before the Flood, and as they wandered about, finding here a tooth and there a bone, and then the stem of a strange tree, they amused themselves by reconstructing in imagination the luxuriant woods teeming with savage monsters which once stood on a level with the shore, and speculating upon the causes which led to the piling up of the gravel strata which now cover them to such a depth.

"Are these animal deposits peculiar to Cromer, Mr. Meredith?" asked Dick.

"No. You can scarcely dig anywhere in Norfolk in similar deposits without coming upon these remains; this is the case in Holland and Belgium also, so that there is positive evidence that the German Ocean is of comparatively recent origin, the

two countries having once been connected by a great plain, a portion of which is now covered with water. From the bottom of the sea the fishermen often dredge up bones and fragments of trees similar to those in the base of this cliff."

The short winter day soon drew on to dusk, and they strolled on to the pier to see the sun set in the sea on this the east coast of England. The land so juts out, and to the northward the water so bites into the land, that not only does the sun rise from the sea, but it also sets in it.

The surf-crested waves which broke heavily against the black breakwater were red and lurid with the sunset light, and in fastastic masses, flooded with red and orange, the clouds gathering about the descending sun. And then, as the strange glare faded away and the grey dusk settled over the chafing sea, a white light shot out from the lighthouse tower, and traced a gleaming pathway over sea, pier, houses, and woods, as it revolved with steady purpose.

CHAPTER XXXIX.

The Boys' Note-Book.

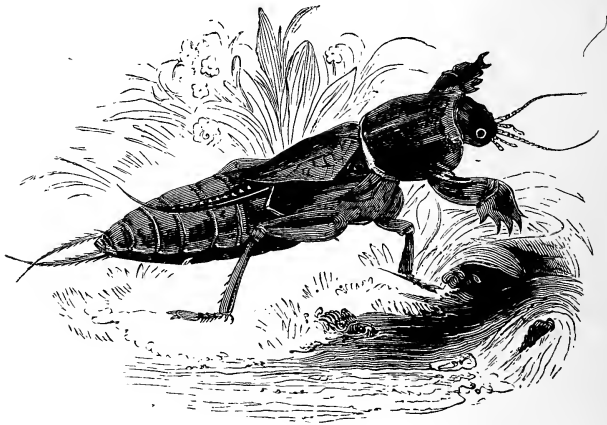
A NOTE-BOOK was incidentally mentioned in the last chapter. Properly speaking, it should have been mentioned long before.

On the table in the boat-house lay a large folio manuscript book, in which the boys noted down whatever, in their reading or observation, struck them as noticeable or worth remembering, or of which they wished to be reminded at some future time, when they should have leisure to look up what they wished to know concerning the matter noted. Before therefore I close this "strange eventful history," I shall quote a few pages at random out of their Note-book, just to show how it was kept up.

In the left-hand margin of each sheet the date of the entry was written opposite each note, and each jotting was signed by the one making it. So that the book ran after this fashion:—

“They have a novel mode of netting shore birds at Lynn. They have long nets stretched on poles about six feet high, on the sands towards dusk, one line below high water mark and the other upon the ridge.”—F. M.

“All grain-eating birds feed their young on insects—as a matter of course because there is no grain in the spring—so they make up for the damage they may do to the grain. I



MOLE CRICKET.

shall write a letter to this effect to the Secretary of the Sparrow Club here. The fellows in that club are as proud of their sparrow heads as a red Indian of his scalps.”—F. M.

“Crickets are the thirstiest of all thirsty creatures.”

“Mem. How do flies walk with their heads downwards, and how do they buzz?”—R. C.

“Caught a lizard in the garden to-day, and when I touched it, its tail dropped off. Curious habit some reptiles have of parting with their tails. It is done to divert attention from the body, which makes its escape.”—J. B.

“Our keeper set some trimmers on our little lake in the park

last night, and this morning he found on one of them a great crested grebe which had swallowed the bait, and on the other an eel of four pounds weight with a kitten in its inside.”—R. C.

“Frank’s head has a permanent set to one side, from always looking into the hedges for nests. I noticed it in church.”—J. B.

“You’ll get a licking, young ’un.”—Frank.



COMMON LIZARD.

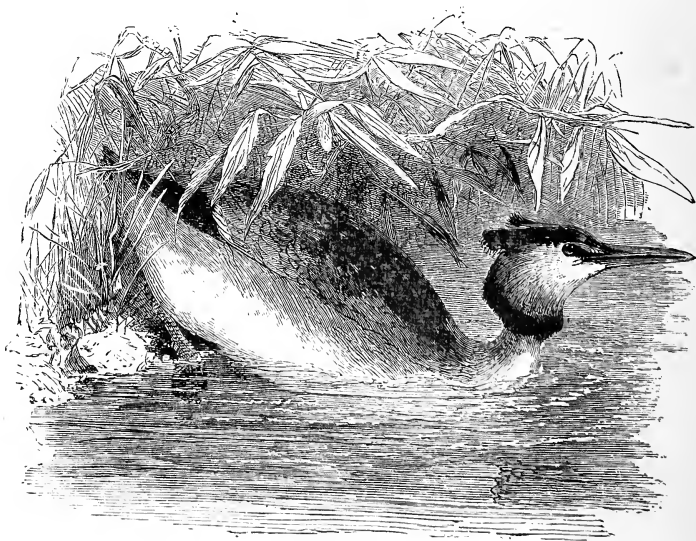
“Bell says that he has seen an osprey resting on one of the posts in Hickling Broad, and it was so gorged after a meal of fish that he rowed quite close to it.”—F. M.

“I saw a squirrel eating some toad-stools which grew at the foot of a tree near Sir Richard’s house. I thought they fed only on nuts.”—J. Brett.

“They say that hedgehogs will go into an orchard and roll themselves on the fallen fruit, so that it sticks to their spines, and then they walk off with it. Should like to see them do it, and I wonder how they get it off again.”—J. B.

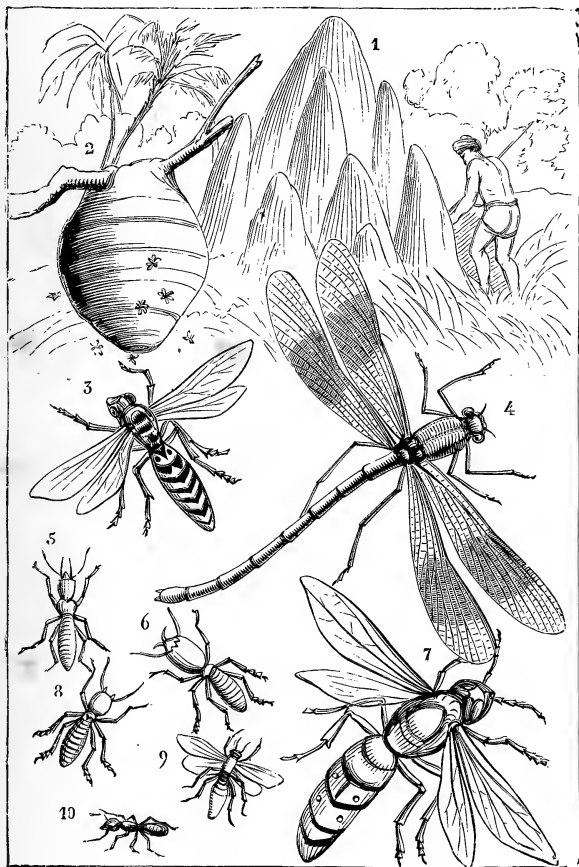


OSPREY.



CRESTED GREBE.

"Saw a robin kill a sparrow in fair fight this morning, and it afterwards *ate* a portion of him! Also saw two rooks fighting like anything, and a third perched on a branch just above them, as if to see fair play."—F. M.



1. Nest of White Ant. 2. Suspended Wasp's Nest. 3. Common Wasp. 4. Demoiselle Dragon-fly. 5, 6. Soldiers of White Ant. 7. Hornet. 8. Worker of White Ant. 9. Wood Ant. 10. Red Ant.

“What a curious instinct it is which leads moths and butterflies, while you are killing them, to lay their eggs. It is their last will and testament!



HEDGEHOG

“I found a brood of caterpillars on a hawthorn-bush; they were the caterpillars of the small oak-eggar. They make a



HONEY-BUZZARD.

silken nest in the branches, and they come out to feed and go in to sleep. There were at the least five hundred of

them. The moth, I see, is a small, dingy brown thing, with white spots on the wings."—R. C.

"Bell's son took a hornet's nest the other day. He was stung by one of them, and was ill for some days, the inflammation was so bad. Bell says that hornets are much rarer now than they used to be, and a good thing too.

"While going to take a wasp's nest to-day, we disturbed a large hawk-like bird, which had been digging it up and apparently eating the grubs. The wasps were flying all about it and settling on it, but it did not seem to mind them. Upon looking at our books we have decided that the bird was the honey-buzzard, one of the short-winged hawks."—F. M.

CHAPTER XL.

A Regatta.—The "Waterlog's" Victory.

THE waters of the broad once more blazed beneath the summer sun. The *Swan* lay at anchor in a reedy bay, and the three boys were sitting on deck, busily engaged in discussing some project which seemed to interest them very much.

For some years past a large yacht had been a prominent object on the Norfolk and Suffolk waters, not on account of her speed or her beauty, but because of her great ugliness of form, and her exceeding slowness of sailing. Cram on as much sail as you could, and yet the clumsiest wherry could beat her in sailing. Her owner entered her for many a race, and she was invariably so badly beaten that she became a laughing-stock. Her name was the *Waterlily*, but she was facetiously christened and universally called the "Waterlog." Her end was tragic. One time when the waters were very high after great floods, her owner sailed her into a small broad, and, not taking her off in time, the waters fell, and there was not depth

enough to float her out, and she became fixed in a trap, out of which she could not be removed. She was offered for sale, but no one would buy her; so her owner, in a fit of disgust, first dismantled her and then set fire to her, and so she perished. Her nickname survived her, however, and, to the great indignation of the boys, descended upon the *Swan*, whose stiff and stately motion and peculiar appearance had made her the mark for it.

They were now holding an "indignation meeting" upon the subject, and a way had just been mooted by which they hoped to sustain the dignity of their boat.

"Wroxham Regatta is on the 20th of next month," said Frank, "and there is a race open to all classes of yachts except the winners of the previous races. Those will clear off the crack ships, and I don't think we need fear any of the others. I vote we enter the *Swan* for it, and show them how she can sail. The prize is a very handsome cup."

"Do you really think she will have any chance, Frank?" asked Jimmy.

"Not with her present rig; but we will add a big top-sail to both main-sail and mizen. Her double shape will enable her to stand any amount of sail, and if we have a good side wind and plenty of it we shall stand a very good chance."

So it was decided that the yacht should be entered for the race, and they set to work to prepare two immense yards and top-sails, and to practise sailing the yacht with them up. Mary Merivale and Edith Rose were invited to be on board during the race; the elders were to be present on board a friend's yacht to witness the regatta.

The day of the regatta arrived, and a strong north-wester was raising mimic waves on the broad. The boys had taken the yacht overnight to Wroxham, and in the morning they met Mary and Edith at Wroxham Bridge, and took them on board.

"Is it not dreadfully windy?" asked Edith Rose, as the wind blew her curls back from her pretty face.

"It is just what we want, Miss Rose," answered Frank.

"Wouldn't it be safer if we were not to be on board during the race? I am afraid you are going to be too venturesome. I heard you were going to put some more sails up, and I am sure these are large enough," said Edith.

"Pray don't desert us now," said Frank, so piteously, that Edith made no more objection for fear of vexing him.

Over the fence of tall reeds which now separated them from the broad they could see scores of white sails and gay pennants, and it was evident that there was a large assemblage.

"Why, Frank," said Mary, "I declare you are quite nervous; I can feel your arm tremble."

Frank indignantly repelled the accusation, but Jimmy, who was sitting on the roof of the cabin kicking his heels, said:—

"I am awfully, miserably nervous, and I believe we are going to make a tremendous mull of it, and we've done all we can to make ourselves conspicuous."

They had entered the yacht, out of a spirit of bravado, under the name of "The Waterlog," and they had painted the name on slips of stout paper, and tacked it over the legitimate name of their yacht.

"Nonsense!" was Frank's somewhat angry commentary on Jimmy's speech.

They now entered the broad, which presented a lively scene. Yachts of all rigs and sizes were skimming about, with gunwales under, to the stiff breeze. When the signal for the first race was given, those yachts not engaged in it came to an anchor, and the *Swan*, on whom all eyes were turned, took up her station next to the yacht in which were Mr. Merivale and his friends.

The wind continued to freshen and grow more gusty, so that of those yachts which started with their top-sails, two had them carried away in the first round, and the others had to take them down, and the yacht which won had a single reef in her huge main-sail.

There were three races before the open race for which the *Swan* was entered under her assumed name. I have not space to dwell upon the incidents of these, nor to dilate upon the glorious life and movement of the broad, with its crowd of white sails, and its waves sparkling in the sunlight. Three of the best yachts were, through being winners in the races, prohibited from sailing in the open race, but there were nevertheless a sufficient number of entries on the card of the races to make our boys dubious as to the result of their somewhat bold experiment. There were six named as to start. Two were lateeners, one a schooner, two cutters, and the sixth was the "Waterlog."

The course was three times round the lake, outside of certain mark-boats; and, as the wind blew, the yachts would catch it abeam for two-thirds the course, dead aft for a sixth, and dead ahead for the remainder. As Frank said, it was a wind in every respect suitable for the raft-like *Swan*.

The race excited a great amount of interest. The *Swan* was now well known to all the yachtsmen, and her change of name provoked curiosity and interest, and as the signal came for the yachts to take their station all eyes were upon the "Waterlog" (as we will call her during the race). As the boys ran up her sails and sailed away to the starting-point, a decided manifestation of admiration arose as the great top-sails slowly ascended under the strenuous efforts of Dick and Jimmy. As they fluttered in the wind, Mary threw all her little weight on to the halyard to assist in hauling them tight and flat.

Mary and Edith took up their places in the bows, where they were out of the way, as there is no jib in a lugger rig.

"Now, Dick," whispered Frank, "if any accident *should* happen—although it isn't likely—do you see to Mary, and I'll take Edith."

"All right, old man."

The yachts started from slip anchors, with the canvas set; and at the flash of the starting-gun, sheets were hauled in, and the six yachts which came to the starting-point bounded away almost simultaneously, the white water flashing away from their bows, and boiling and eddying in their wake. The wind was now blowing very fresh indeed, the other yachts were not only gunwales under, but the water swept all over the leeward half of their decks, and even the "Waterlog," in spite of the width of her beam and double shape, had her leeward pontoon completely submerged.

On they surged, the two girls clinging to the forestay, heedless of wet feet, and breathless with the swift excitement: Frank firmly grasping the tiller, his teeth set and his blue eyes gleaming; Dick at the main-sheet, and Jimmy standing on the counter with the mizen-sheet in his grasp, both watching their captain, to be instant at his commands.

The first round was quickly over, and then the position of the competing yachts was this:—The schooner was ahead, then at a little distance came the "Waterlog," and close behind her the rest of the yachts in a body. As they passed Mr.

Merivale he cried out, "Well done, boys! you'll get a good place."

Next they passed a small boat, in which they saw Bell, who shouted,—“Haul in your sheets a bit more,—your top-sails will hold more wind.”

Frank saw the wisdom of this advice, and as he followed it, the "Waterlog" shot forward and gained a little upon the schooner.

"If the wind were to freshen a little we should come in second," said Frank.

But as they commenced the third round the wind dropped most unexpectedly. The schooner in front rose nearer the perpendicular and her speed increased; the "Waterlog" fell back, and a large lateener behind fast overhauled her.

"How dreadfully annoying," said Frank; and he hated that lateener with a very vigorous hate. They passed Bell's boat again, and the old man shouted—

"Look out, Master Frank, a squall will be on you in a minute."

The sudden lull was but the precursor of a tremendously violent gust. As the yachts were beating up to round the last mark-boat before getting a straight run in to the goal, the boys saw the trees on the land bow their heads with a sudden jerk, and then the squall was upon them. It did not affect them so much when they were close hauled, but as the leading schooner rounded the boat and presented her broadside to the wind there was a great crash, and her cloud of white canvas descended upon the water. Her foremast had broken close by the deck, and in falling had snapped the remaining mast half way up, and she lay like a log on the water. The lateener, close upon her heels, heeled over so much, that she began to fill through the hatchway, and to save her from an upset her sheets were let go, and with her sails wildly fluttering she drifted on to the disabled wreck. All this was the work of a few seconds, but there was time for Frank to unloose the halyards of the top-sails, which were purposely made fast just in front of him, and to give a warning shout of "heads!" and then, to the great alarm of the girls, the sails came clattering down to leeward, and they rounded the boat in safety, though cannoning violently against the wreck as they did so. And now they were *first!* The cutter next behind them, in shooting up

into the wind to save herself, lost way, and was no longer a dangerous enemy, and although the other yachts rounded the boat, yet they were far astern, and the victory of the "Water-log" was secure. At a word from Frank the two girls, one on each side, stripped off the assumed name, and let the papers float away on the wind, and, amid vociferous cheering and clapping of hands and waving of handkerchiefs, the *Swan* shot past the winning-post, and so gained the prize.

Although gained partly by accident it was a great triumph for the boys, and the girls were quite as proud and delighted as they were.

"You are a dear good boy, and I'll give you a kiss," said merry Mary Merivale to her brother, "although you would rather have one from somebody else than from me, I know."

"I say, Molly, I wish you'd get her to give me one."

"You will have to wait a very long time for that, Mr. Frank."

"If you would give Dick one, she would give me one."

"That's all you know about it, sir," said Mary, making him a saucy curtsy.

CHAPTER XLI.

The Conclusion.

Now this chronicle of the doings of my three boys must come to an end. I have grown very fond of them, and I hope you have too.

We will take a big jump from the doings recorded in the last chapter, and look in upon them at a time fraught with importance to each of them. Their pleasant school with Mr. Meredith is broken up. Frank and Dick are going to college, and Jimmy is about to be articled to a Norwich solicitor. They will always remain the best of friends, but still the new

times will never again be like the old. New interests, new companions, new ambitions, all will leave their mark and have their influence, although this I am sure of, that the memory of this glorious partnership of three will always remain green and fresh with them, and have the greatest of all influences on their future lives.

Mr. Meredith had invited all three of them to dinner, and when Mrs. Meredith had retired the conversation grew more personal and confidential. They looked upon Mr. Meredith as an intimate friend and counsellor, as well as a tutor and schoolmaster, and they told him their plans and hopes, just as if he were one of themselves.

Presently a silence fell upon the table. Frank looked at Dick, and Dick looked at Frank, and Jimmy kicked him under the table, and at last Frank cleared his throat with a preparatory "ahem" and said,—

"I am not good at making speeches, Mr. Meredith, but we wish to express how very much obliged we have been to you for the kindness and the—in fact the—the—well, what we mean to say is—that you are a brick of a good fellow, sir."

"What an awful muddle you have made of it, Frank," said Dick, in a reproachful whisper, and Jimmy launched a vicious kick at him under the table.

There was a twinkle in Mr. Meredith's eye as he drank off his wine, which was partly due to mirth, and partly to a deeper feeling. He said,—

"I know what you mean, Frank, and in return I may say, that I am both glad and sorry that the hour has come for us to part for a time. I am sorry, because I have much enjoyed your companionship for the last three years, and I believe you have done me as much good as I have done you. I am glad, because you have become such fine young fellows, and I have had a hand in the making of you, and you must do us all credit. Jimmy will make a good lawyer, I think; and he must remember that the law is an honourable profession, and that lawyers take the place of the knights of old; they must do all they can to succour the widows and fatherless, and never allow themselves to be made instruments of oppression. I will give Jimmy just one piece of advice: Go straight, and never attempt to finesse. I believe that this clever finessing, and attempting to outdo other lawyers in cleverness, has been the

cause of the moral ruin of many an able lawyer. Dick, I am sorry to say, will have no need to be of any occupation, but he must try to get plenty of voluntary work, nevertheless, for no man's life can be noble unless he does some of the world's work. And Frank, what are you going to be?"

"I don't know yet, sir," replied Frank, "I should like to be a soldier, if I could be sure of active service pretty often."

"I wish you would be a soldier in a purer army, my boy. We want some more men of your strength and energy to fight the devil with. We want men who will not only do what they have to do with all their might, but who have plenty of might to use."

"I haven't the gift of the gab, sir," said Frank modestly.

"That would come with practice and study, and, 'out of the fulness of the heart the mouth speaketh.' But come, we must not leave Mrs. Meredith so long alone on this your last night here."

So they went into the drawing-room and had a quietly pleasant evening.

When they left, they walked together down by the broad, talking of many things. It was bright moonlight, and the *Swan* lay still and distinct on the water. It was warm, being in the middle of summer, and it was not late; and as they stood looking at the boat which they had built, and which had served them so well, they saw Mary and Edith Rose, who was staying with her, coming towards them, and Mr. and Mrs. Merivale not far behind.

"Good night," said Jimmy, "I shall see you both in the morning;" and off he went.

"Poor Jimmy," said Frank, "he does not like both of us going away, and he to be left behind alone."

The two girls joined them, and Frank and Edith walked off together, and Dick and Mary did the same in another direction.

"Mary," said Dick, "Mr. Meredith said that I ought to do some work in the world."

"So you ought, Dick," she replied; "both Frank and Jimmy are going to be busy, and I did so hope you would do something too."

"I mean to do something," he replied, with a quiet smile, "but I shall not tell you what it is yet. But if I do something

which will show that I am of some use in the world, and not a mere drone, will you marry me?"

It was not light enough to see if she blushed, but I am sure she did so very sweetly. What she said, very naively, was this :—

"I thought you would ask me some time, Dick, but I did not want you to *quite* ask me until you came from college. We are only boy and girl, you know."

"I am quite satisfied, Mary," he said, in that quiet, gentle voice of his which made you like him so much,—and so a compact was made, which both of them faithfully kept.

Frank had not dared to say half so much to Edith ; but the next morning, when he was saying good bye to them all, and it came to her turn, he looked her steadily in the face as she took his hand, and, moved by a sudden impulse, she put up her face to be kissed as Mary had done, and as he gravely kissed her, he said in a low tone, designed for her ear alone,—

"I am going to do my very best, Edith, and what I do will be for your sake."

* These were sweet words to the little maiden ; but Frank received by the next morning's post a little Testament from her, with these words written on the fly-leaf—

"Not altogether for my sake, Frank," and the half rebuke was of great service to Frank.

And so, God be with them !



A POSTSCRIPT

TO

THE FOURTH EDITION OF THE "SWAN AND HER CREW."



A POSTSCRIPT.

OF course I was greatly pleased with the wide interest taken in the adventures of the *Swan* and her crew on the broads and rivers of Norfolk. I received a great many letters asking for further details, and some readers wished to make a craft like the *Swan*. Now just the same fun can be extracted out of a cruise in a craft of normal build; and such a cruise is not at all expensive.

Shortly after writing the *Swan*, I determined to take another look at the "Broads," for writing about them had whetted my appetite for their beauties. I accordingly undertook a cruise, and I thought that this recital of it might be welcome to those who had read the *Swan*, and who might wish to take a similar cruise.

Now when I told my friends that I was going yachting, they said, "To Norway, I suppose?" and when I replied, "No, on the Norfolk rivers;" they seemed to think that "yachting" was rather too grand a name for it, and that what I was really going to do was to sail a small boat on uninteresting drainage dykes.

Indeed, I find that to the majority of people this "low country" of England is a *terra incognita*. Therefore, for the sake of those who do not know it, let me begin by attempting a short description of this really remarkable tract of country.

It is like a portion of Holland tacked on to England. Taking Norwich as the apex of a triangle, of which the sea-coast is the base, and giving each side of the triangle a length of twenty miles, this triangle would include nearly the whole of the Broad district; land for the most part as flat as a billiard-table, and not very firm, intersected by three important rivers, and dotted with more than a score of lakes, locally called "Broads." The northernmost of the rivers is called the Bure, or North River, and is navigable from Aylsham to Yarmouth, where it joins the Yare, a distance of forty miles by the ordnance map. Then from Norwich to the sea at Yarmouth the Yare runs its sinuous course for five and thirty miles, and is both broad and deep the whole of the distance.

On the south the Waveney is navigable for seven and twenty miles, from Bungay to Breydon Water. Breydon Water is a tidal lake, which receives the waters of the three rivers; it is four miles in length, and narrows at Yarmouth to the estuary which runs for three miles to the south, almost parallel with the coast, before it enters the sea. With the minor rivers there are a hundred and twenty miles of splendid sailing ground, to say nothing of the Broads. The fall in the Yare, from Norwich to Yarmouth, is only four inches to the mile, and the tide either runs, or "backs" the water up, the whole distance.

There is a great and constant traffic on all the rivers, which is carried on by sailing barges, called wherries. They are long, shallow vessels, with very good lines, very sharp fore and aft, and dish-like in the middle. They have one large mast, stepped well forward, and carrying a huge tanned sail, supported on a tremendous yard. Although they draw but little water, they will sail as close to the wind as a yacht, and are very handy. They are generally managed by two men, or by a man and his wife.

Of yachts there are any number, from five up to thirty tons; and the Norfolk and Suffolk Yacht Club, and the Yare Sailing Club, are flourishing institutions. The yachts are generally cutter-rigged, with large mainsails, balloon jibs, and topsails. The press of sail they will carry would astonish any one who did not know of the deep, heavily-leaded keels which they possess.

It is a very common thing for Norfolk people to spend a portion of the summer cruising about the rivers and Broads,

and this year I determined to follow their very excellent example. A yachting friend put me into communication with the proper parties, and I at once had half a dozen yachts, which were for hire, to choose from, and when all arrangements were made I left this northern town, and as the dawn was breaking, arrived at Norwich, whither my wife had some time preceded me. That day, Friday, was devoted to purchasing provisions and getting used to the feeling that there was no more work to do for a little while, and that letters and proof-sheets might take care of themselves.

Then on the Saturday morning the dogcart came to the door just as a man in blue with a big bundle in his hand was walking up the street. This was the man we had engaged for the trip, and a smart, handy fellow he was. It seemed at first as if we could not stow our hampers and packages away, but in a short time everything was in. My wife was to accompany me for the first few days, and, unlike most ladies, she did not (and never does) keep me waiting. Presently we were bowling along through a park-like country, between hedgerows which were bright with mallow and bindweed, and white patches of elder-flowers, and under a sky which was of an opaline grey, but growing darker to windward. The yacht lay at Coltishall, on the upper waters of the Bure, and about seven miles from Norwich. As we passed a spot where the trees on either side grew thick and bent over the road, a weasel ran across the road with a mouse in its mouth.

"There goes a mousehunter, ma'am," said the groom, using the vernacular name for the weasel.

Presently the sky grew leaden in colour, and down came the rain. In the midst of the heavy downpour we reached the boatyard, where the yacht, the *Queen of the Bure* lay in a creek off the river. We hastily got our things on board and dived below for shelter. It took us some time to discover all the numerous lockers and contrivances for holding and storing things, and the Gypsy was delighted with the compactness of everything. She quickly assumed the command and under her directions, our hampers were emptied and the lockers filled, and the yacht began to look tidy and homelike. Then as the rain still rattled hard upon the cabin roof, we prepared and ate our dinner. When that was finished, and the man had washed the plates and glasses, the rain grew lighter and the leaves of

the trees near us flickered a little, showing that there was a light air, so we resolved to make a start of it. The sail-cover was taken off the sails, the snow white canvas rose in the air, and the sails stood taut and trim, the yacht was pushed and towed out of the narrow creek into the river, the sails just filled with a slight air from the westward, we gathered way with our bows to the eastward, and our cruise had begun. The Gypsy put on her waterproof and made herself a comfortable seat in the stern sheets, I took the helm, and Palmer, the man, busied himself in putting things to right forward. We glided along over the placid rain-dimpled water, which was so clear that we saw the fish darting aside into the long waving weeds, and between banks luxuriant in grasses and flowers, which bent heavily beneath their watery, gleaming load.

“This is very pleasant, in spite of the rain,” said the Gypsy, and so it was. The meadows margining the river were flat, but behind them were wooded undulations of great beauty.

And now it is time to describe the yacht. Her tonnage would be about ten tons. She is of a peculiar rig. Right in her bows a tall mast carries a large working lug-sail, with proportionate yard and boom. From her counter rises a mizen mast, with a fore and aft sail. The main boom has two sheets working through blocks on each side of the cabin roof and belayed to pins passed through a rack on each side of the cabin door. The weather sheet is the one which is always worked. It is a very convenient rig to work, because a man at the helm has the mainsheets ready to his hand in front of him, and the mizen sheet belayed to a cleet just behind him. Thus one man could manage to sail the boat at all times.

Forward, the yacht has a very roomy fore-castle, with two berths, and a cooking-place with an excellent stove and appendages. Aft of that is a large and comfortable cabin with two berths, and a table with two leaves, and then another cabin with two more berths. In the after cabin are a water-tank and a filter. The cabins are between six and seven feet in length, and not quite high enough for a tall man to stand upright in. Between the cabins and the “counter” is the well, or stern sheets, with a wide seat all round. This will give a rough idea of the boat which was to be my home for a fortnight.

The river was rather narrow, but it was deep and very tortuous. On a wooded eminence close on our left was

Belaugh Church. After making a circuit of three miles we come within a quarter of a mile of it again, having passed the first of the Broads, a small one called Belaugh Broad lying off the river to our left.

The rain had ceased, and glimpses of a pale blue sky were visible. After we had slid along with slow, delicious motion, past shady coppices, picturesque cottages and gardens gay with flowers, for about seven miles, we came to Wroxham old village, and then to the new railway bridge where we had to lie to and lower our masts, that we might pass under. The sails were lowered and the fastenings of the masts unscrewed. The masts work on a fulcrum just above the deck, and the lower ends are heavily weighted with lead and iron to act as a counterpoise. Slowly the huge spars descended, controlled by the carefully paid-out stays, until they lay flat, and the trim yacht looked a wreck indeed. Along the waterways on each side of the yacht lay two very long poles with a knob at one end and a spike and shoulder at the other. These were "quants," and their use was now apparent, for the man took one of them, and going forward he placed it in the water, and with the end against his shoulder, he walked aft, so punting the yacht along while I steered. We so passed under the railway bridge, and then a short distance further under the low, narrow stone bridge at Wroxham. Below this we moored to the bank and raised our masts again. We waited here until the evening, for the Gypsy's father was to pay us a visit until the morrow night. Soon after the train came in he made his appearance. I went to the bridge in our jolly boat and brought him on board. Then we had tea, and afterwards hoisting our sails, we dropped slowly down the stream in the quiet eventide for a mile and a half, when over the right bank we could see the mast of a yacht at anchor in Wroxham Broad, and presently we made a sudden turn as if into the middle of a thick oak coppice, but in reality through an opening into the wide expanse of Wroxham Broad.

Sailing right across, we ran her up into the wind and dropped our anchor, and in a short time were lying quietly within a hundred yards of the reed-margined shore.

This most beautiful Broad is a little more than a mile long, and a third of a mile wide. Along one side of it the river runs, separated from the lake by a narrow "rond," or reed-covered

strip of land, with low oak and alder coppices here and there. On the other side, beyond the reeds, the land rises in wooded undulations, with park-like spaces between. All round the Broad is a dense and sheer wall of reeds, seven feet high, in and out of which the coots, water-hens, grebes, and wild ducks are eternally splashing and swimming. Then all was still and lonely. The yacht, whose mast we saw, was hidden from sight round a wooded curve, and no human being was in sight. The water was calm and unruffled until the low orange sunset, when a breeze came and covered it with sparkling wavelets. As the gloaming deepened, the water fowl came out from their haunts and dotted the Broad in numbers; the reed-wrens sang shrilly yet sweetly in the reeds, and the reed-buntings chattered vigorously, the coots and water-hens called and croaked, and the "water-chickens," as the Gypsy called the young ones, chirped unceasingly. It was very novel and very charming, this being alone on a lake, and no "going home" after the day's outing. It was funny to think that we *were* at home, and that all night, and for many nights, the dark eerie water would be our constant companion. There was a fascination in the surroundings which made it impossible to go below until the night was as dark as it meant to be, and then we reluctantly went into our respective cabins, shut the doors, and drew the curtains, got our bedding out of the lockers and made our beds, put out the lights, and turned in.

Sleep I could not, for the strangeness of the thing; but there was no weariness in the want of sleep. I lay awake listening to the wash of the water against the yacht, the rustling of the wind in the reeds, the loud and incessant chirping and chatter of the birds, which never ceased the whole of the night, and the splash of some large fish which were rising near us.

At last I dropped off for a while, and was then awakened by a terrific yell, proceeding from the fore-castle. I started up, and shouted, "What's the matter?"

After a pause a sleepy voice replied, "I beg your pardon, sir, I suppose I was dreaming."

About two o'clock I again awoke, and on peeping out through the window I saw that it was quite light; the sky was blue, the mists were rising off the water, a cuckoo was loudly shouting his good-day to another, a reed-wren was singing

sweetly, and many water-fowl were swimming close round us, a pair of great crested grebes, and two young ones, being within three or four yards of us.

"Do lie still," said my wife; "you can't possibly get up yet."

"Oh, aren't you asleep?"

"Who could sleep while those dear little water-chickens are making such a noise?"

I lay down again until five o'clock, and then I got up and went out into the fresh morning air, which was exhilarating beyond description. Early as it was, there were half a dozen boatloads of men fishing along the eastern side of the Broad, but when I made my appearance they left, and went to the river. Fishing is not prohibited in the Broad, but a protective tax of half-a-crown a day is levied upon those who fish there. Otherwise, the owners of the Broad courteously throw it open to yachtsmen and fishermen. These men had evidently no mind to pay their half-crowns, and fearing that in me lay an enemy, they bolted. I got out my rod and line, and baiting with a worm, flung the bait into the water, and laid the rod down while I looked around and feasted on the loveliness, rejoicing in the fresh air and the freedom. Suddenly, while I was watching a pair of owls hawking to and fro over the marsh, every now and again descending upon some tit-bit, I heard my rod rattling against the side, and then saw its top bending violently. I took hold of it, and shortly secured a goodly perch, and then two or three others, and also several roach and bream. The perch our man "flayed," stripping the skin off (I had been trying to scale them, and found it an almost impossible task); and they were fried for breakfast with some bacon.

The bedding was put out on the boom to air, the cabins tidied, the table laid for breakfast, the kettle boiling, the bacon and perch hissing in the frying-pan, and we sat down to a thoroughly comfortable and enjoyable breakfast. Our man showed himself a good cook, and very handy and civil. It was a great comfort to have a fixed stove and a long chimney, which could be unshipped when not in use. The majority of the yachts have movable stoves, which are taken ashore, or put on the leeward side of the deck when in use.

After breakfast the man washed the breakfast things, took

up the carpets and shook them, and swept and mopped the yacht until she was beautifully clean. He took a great pride in the appearance of the vessel, and all through our cruise he treated her with the greatest care and tenderness; she seemed to be a living individuality to him.

As it was Sunday we made the sacrifice of not sailing about, and I did not fish after breakfast, but we spent a pleasant time rowing about in the jolly, running her head into the tall reeds, and then lying silent watching the black-headed buntings and the reed-wrens, both of which were there in great numbers and kept up a constant twittering and chattering. They would come almost within arm's length of us, and give us abundant opportunities for observation. The coots and water-hens led their young families about, and there were three pairs of great crested grebes, which after a while seemed to be assured that we meant them no harm, and would come very close to us.

I deeply regretted that we had not brought an opera-glass with us. The old birds led their young about, and dived every few minutes, often staying under a considerable time. When they reappeared the young ones would swim up to them, and we could see the glitter of a small fish as it was transferred to the mouth of a little one. Nor were the young ones backward in diving for themselves.

The most remarkable thing was the great number of cuckoos which were about the Broad. They were constantly flying across and calling one to another, frequently making use of the treble note cuck-cuck-coo which distinguishes them in July. When we again visited the Broad, a fortnight later, not one was to be heard, and we only saw one or two. Every little bay was carpeted with the leaves of the water-lily, and the flowers, which grew of great size and in great abundance, absolutely shone in their perfect purity, so dazzling were they in their white and gold.

In the runs between the reeds we found several bow-nets set for tench and bream. The broad has a very muddy bottom, such as bream love, and it is as full as it can be of these fish, and there are also great numbers of pike, perch, roach, and rudd.

Leaving my wife reading in the stern sheets, I pulled out to the river and had a glorious swim, and then Mr. C. and I rowed about a mile down the river to the first entrance to Hoveton Great Broad, a larger Broad than Wroxham, and lying

on the other side of the river. Here the black-headed gulls breed in great numbers. As we rowed towards the easternmost end of the Broad where they breed, we saw hundreds of them floating on the water, standing on the low clumps of vegetation where they make their nests, and wheeling about in the air, making a great noise the while, and explaining the origin of a noise we had heard at Wroxham, and which we took to be that of a large rookery somewhere.

As we drew near all that could fly took wing, and the air was filled with white swooping wings and the deafening noise of their cries. The water was dotted with the young ones, from the tiny little brown and yellow ball a day old to the almost full-grown bird, nearly able to fly. The nests were scarcely a yard apart. We saw no eggs, as it was so late, but the reed margin was crowded with young ones trying to push their way in. We took two nearly fully fledged ones with the intention of keeping them, and put them under the stern thwart, while the old birds swooped angrily within a yard of our heads. This part of the lake was very shallow, with an apparently unfathomable depth of soft black mud. Its surface was thickly covered with water-lilies, the leaves of which were swarming with flies. We pushed our way through the lilies and clumps of giant rushes into the open water, and made for the lower entrance into the Broad, which we found with some little difficulty, for at a little distance it was hidden by the reeds. A few yards along this brought us into the river again, and we saw that immediately opposite us was the entrance into Salhouse Broad, on the opposite side of the river. We went on to it and found it to be a small Broad, but wonderfully lovely, having high-wooded banks on one side of it. There were two boats fishing there, and they were pulling in the bream as fast as they could. We rowed up the Broad, which was graced by the presence of some swans and many long-necked grebes. Many times we saw a rush of small fry out of the water as a pike or big perch made a charge at them. We entered the river by another channel, and rowed up to Wroxham, stopping now to watch a lapwing feeding a few yards off and unconscious of our presence, as we peeped through an opening in the reeds, and then to watch a snipe bleating in the air above us. We saw four of the latter in a short distance. They were flying at a good height, sweeping and circling about, and at short intervals

descending rapidly in a diagonal direction to the left, when, and then only, the peculiar sound—something like a big bee giving an angry buzz, or a lamb baaing,—which is usually called bleating, and in Norfolk “lamming,” was emitted. I cannot say how the noise is produced, whether by throat, or wing, or tail, but I noticed that the tips of the wings have a very marked vibration out of the line of the rest of the wings. I wrote a note to the *Field* when I got to the yacht, and it was inserted the following Saturday, the Editor referring me to No. 1009 of the *Field* for an article on the subject. When I tried to procure that number, however, I found it was out of print.

When we reached the yacht we saw the Gypsy looking about her with a puzzled air, and she said,

“Can there be any sheep close to us? I don’t see any, but I have heard them all the morning.”

Her astonishment was great when we pointed out to her two snipe, which were bleating just overhead.

The young gulls became quite tame in a short time, and went peering about all over the yacht with a most quaint and self-possessed air. At the Gypsy’s request, however, we restored them to their native element.

Later on I rowed my wife to Hoveton, to show her the gullery, and this time we found three eggs, two with the young birds just pecking their way out of them, and the third addled. A fortnight later, a great many of the gulls had left for the sea.

Mr. C. left us to go home by train from Wroxham, and we spent the evening reading and talking. The sun set in a sea of brightest amber, and the Broad was irradiated with a wondrous light. The reed wall shone like emerald with a broad line of gold where the rise and fall of the water had left a watermark along their lower stems. Beyond the reeds the trees were blue-green in colour and picturesque in form, and over the marsh the same two owls hawked silently and busily.

That night we slept as soundly as possible, and woke early feeling mightily refreshed. After breakfast everything was made ready for a start, the sails were hoisted, and we strained at the halyards until the canvas was as flat as a board. Then while I kept the yacht’s head to the wind, the man hauled on the anchor-chain until we were right over the anchor. Then by the aid of the windlass it was slowly dragged out of the soft, deep mud, and we were under way, and reaching across the

Broad to the "gateway" into the river, which we soon entered. The wind was against us, and it was light and variable, so that it required delicate manipulation of the helm to work her down the somewhat narrow river. But there was no hurry, and the day was bright and pleasant. We marvelled constantly at the luxuriance of the vegetation which covered the banks and grew into the water. Reeds ten feet high, flags crowned with their yellow flowers, tall smooth rushes which bowed before the wind in such graceful curves, the sweet sedge with its curious catkins, tangled grasses of many different kinds and with waving, feathery plumes, clumps of forget-me-nots, with other flowers of a kindred blue, tall foxgloves and taller spikes of purple loosestrife and spreading tufts of valerian, and bushes of deadly nightshade, but more conspicuous than all for their quantity, dense clusters of the cream-white and strong-scented meadow-sweet which lined the banks in wonderful profusion:—these were the plants and flowers which with numerous others made the banks of all three rivers a mass of colour and beauty, changing as we passed along with kaleidoscopic variations. Then below all this wealth of loveliness were the lilies, yellow and white, and their cool green leaves dancing on the rippling water. Often too when we crushed against the soft banks while tacking, for every inch of room was wanted, the odour of the sweet gale rose to our grateful nostrils. To one so fond of nature as I am, all this surpassing freshness and loveliness was intoxicating in the intensity of the pleasure it gave me. Even if I shut my eyes I seemed to *feel* it all upon every part of my body.

I enjoyed myself with my whole being, and more so on these rivers and broads than in any other place I have ever been to.

We quietly bent our way down the sinuous river, passing the "Black-currant Carr"—a long low coppice fringing the river, which our man told us was full of black-currant bushes growing wild.

While nearing the shore upon the port tack, the boat's way lessened, there was a surging up of black mud in our wake, she would not answer the helm, and then we stopped, hard and fast in the mud. We backed the mainsail, got the quants over and pushed our "level best," and she would not move, while the quants sank so deep in the mud that it required almost as much force to pull them out as we had expended in pushing

them in. For a long time we pushed and worked the helm to and fro to try and loosen her, without avail, but at last she moved an inch or two, and then, as we redoubled our efforts, she moved off, and we sailed off on the starboard tack, only to run on the mud on the other side. We soon pushed her off, however, and then we could make a "long leg" down a reach which bent to the northward. After splashing my quant in the water to clear the mud off, I was laying it down with the point towards the bow.

"Don't lay it that way, please sir," our man cried.

"Why not?"

"We shall be unlucky all the voyage if you do. The point should always be laid towards the stern, and the boat-hook the opposite way."

On our right hand lay the Decoy Broad, for an interesting description of which see White's *Eastern England*. On the left a little lower down was Hoveton Little Broad, where there was also a great number of black-headed gulls. We passed a boat whose occupants were trailing for pike, having a pole stretched across the boat with lines affixed to both ends.

We stopped at the pretty little village of Horning, which lies on the left bank of the river, to buy some bread and replenish our big beer jugs. We bought a quantity of lemonade and ginger beer, and upon our saying that we were coming back that way and would return the bottles then, they only charged us for the liquid. I thought there were not many places where such trust would be shown, and it speaks well for the Norfolk yachtsmen that it is so. Indeed there is the greatest good feeling shown by the wherrymen and others who get their living by the rivers to those who take their pleasure thereon. They give you a cheery greeting as you pass, and upon all occasions give you all the assistance they can. Our man had been a wherryman for seventeen years before he turned yachtsman, and that is how he acquired his wonderful skill in sailing. I used to think myself a very good sailor, but every day he had something fresh to teach me. My first lesson was not to shave the corners.

"It is the fault of all amateur sailors, sir, that they cut it too fine around the corners—always take a good sweep around the corners, no matter how near the wind is. If you don't, the water pressing against the bank throws you off, and

you have to make a double turn to get round into the next reach."

He used to watch the wind as it bowed the reeds and grasses far over the marsh, and the sails of the wherries and yachts (which seemed to be sailing on the land, so completely were the curves of the river hidden in the distance), and he was ready to meet or take advantage of every shift and gust of it. In the summer time wherry-sailing is pleasant enough, but in the long dark nights of the winter, when the wet freezes on the quants when they have to pole along, it is cruel work. Two men or a man and his wife are sufficient crew for a wherry. They are generally paid by the load, and a favourable wind and short passage mean money, while with no wind and much quanting it is poor pay. Yet so fond are they of their craft, and so proud of their sailing qualities, that they will often lose an hour of the tide or a favourable breeze to wait until another wherry going the same way is ready to start, so that they may have a race to their destination for a pot of beer. Many is the discussion they have when gathered together in the kitchen of some riverside inn as to the qualities of the vessels, and matches are made to be sailed as opportunity offers. The wherryman is fond of a strong brew of tea, and it is generally made in the kettle, which then, they say, never "furrs." When I found out this predilection, I gave our man the *carte blanche* to make his own tea, and it was a caution to see the number of spoonfuls which he put into the pot.

Opposite Horning ferry is the Little Broad, and lower down on the right bank of the river is Ranworth Broad, a large and prettily-situated lake.

Horning ferry is a charming spot. It would be very pleasant to stay at the inn, which lies under the shade of some tall trees close by the water, for the sake of the fishing, which is here very good. There were many boats fishing, and they seemed to be catching bream in great numbers. Near the ferry some big perch are to be caught.

Far to the northward we could see the sails of wherries coming down the River Ant, which runs into the Bure below Horning. A few miles up this are Barton Broad and Stalham Broad. Opposite the mouth of the Ant is one of the two dykes leading to South Walsham Broad.

After having beat to windward for eleven miles, we were not

sorry to stop opposite the ruins of St. Benedict's Abbey, and after mooring the yacht to the bank, to cook and eat our dinner. After dinner we crossed the river in the dingy, and visited the ruins of the abbey. A magnificent archway still remains, but has been made use of as a support for a windmill, which is very old and in ruins. A winding staircase led to the top of the archway, and I climbed to the top of it. Even from this inconsiderable elevation the view was a far one. On one side was the well-wooded district we had just left, and on the other a wide prospect of many-coloured marsh diversified by windmills and the sails of wherries and yachts, its horizon so distant that it seemed to melt into the sky. There are fragments of ruined walls within a wide radius of the abbey, showing to what an extent the buildings once reached; but the most interesting ruin of all, to my mind, was a wall about three hundred yards to the east of the arch. It was built on massive flint pillars, something after the fashion of a corn-stack. Parallel with it were the ruins of another wall of similar construction, and between the two was a ditch-like depression. Was it a water-gate? About its ruins were a number of rabbits.

"What nice little dears!" said the Gypsy.

"Yes—to eat," replied the more practical husband, and he forthwith went to a farm house close by and arranged for the destruction of a couple of them by the morning, at the same time buying some milk.

Whenever you look on a Norfolk landscape you are sure to see several churches, and from our boat we could this evening see three or four.

The wind blew rather chilly, and the clouds gathered over the sky, so that the evening was gloomy. We fished and caught nothing except the inevitable bream and roach, and a few popes. When the sun was setting, a wherry with a peculiar rig passed us on its way up the river before the strong easterly wind. It had an immense square sail, and as it drove on up the river, the mountainous square of canvas shut out the flaming sun, and was blackly outlined against the crimson west. We went below early and read, looking out every now and then as a rushing sound told of the passage of a wherry or yacht.

The morning broke clear and sunny, with a more favourable

wind. The first thing we saw was the farmer coming to us with a brace of rabbits.

“How much?”

“Anything you like, sir. A shilling will be plenty.”

They made a capital stew, with some cold mutton, for dinner that day.

The grasses on the bank were so varied and beautiful that my wife wished for a bunch of them to dry, so I jumped ashore, and without stirring from the spot where I alighted, I plucked her at least a dozen varieties. They were up to my neck in height, and I am a six-footer, and they were marvellously thick and luxuriant.

After breakfast we set sail, and in a mile we came to the mouth of the Thurne, a fine broad stream. We had not time to sail up it and renew our acquaintance with the Broads to which it leads, but no stranger to the locality should miss going up it. About five miles up it is a dyke which leads to the Broad called Heigham Sound, and passing this, you would reach Hickling Broad, which to my mind has the noblest expanse of fresh water of any. It is very shallow all over, so that a large yacht could not sail upon it save in the channel, but it has such a golden gravel bottom, and its water is so brilliantly clear, and it contains such hosts of perch, bream, and pike, that it is well worth a visit. From Heigham Sounds a dyke leads to Horsey Mere, and returning to the main stream, you would reach Martham Broad. All these Broads are very prettily situated.

We very quickly ran the four miles from Thurne Mouth to Acle Bridge, where we had to stay to wait for a friend who had promised to join us on the morrow. In the afternoon I walked into the village, which is a mile from the river, to purchase bread, tobacco, and strawberries. A hedge bank near the village presented the richest bit of colour, of wild-rose, poppies, mallow, and convolvulus, that I ever saw. In Acle, too, I met a photographer, of whom I bought some views of one of the Broads. Afterwards I fished, catching a number of bream, which were returned to the water as useless. I also tried for pike, but caught none, at the which I was astonished, as there are plenty of pike in this river; they however do not run freely until the autumn. We saw a great number of hawks hovering over the marshes—some were kestrels, others I expect were marsh-harriers.

In the evening two or three yachts came up the river, and after having lowered their masts to pass under the bridge, they moored close by us. On board one yacht were some old acquaintances who came and had supper with us.

The next day, Wednesday, there was a strong breeze from the westward. We waited until two o'clock for the friend who came not, and then we took in two reefs, in order to avoid frightening my wife, and started. A mile below Acle we passed the entrance to the Black Fleet, an unnavigable and very muddy dyke, which four miles away joins a very long Broad with numerous arms, the different portions of which are called Filby, Ormesby, and Rollesby Broads. Here there is capital bream-fishing, and good fishing accommodation at, I think the Eelsfoot public-house. It is within easy reach from Yarmouth or Acle by road, but is inaccessible to yachts.

We flew along at a great pace for the next ten miles, passing Stokesby and several houses known as the seven-mile, six-mile, five-mile, four-mile, three-mile and two-mile houses, until we came to the narrow parts of the river just above Yarmouth. Here, owing to the sudden bend in the river, we had to tack, and as the tide, which had been strong under us, was now run out, and shallows were numerous, it was very difficult navigation, and it was not long before we were hard and fast aground. All our pushing was of no avail, and at last we were obliged to accept the proffered help of a waterman on the bank. We carried a rope ashore in the dingey, and the man putting the loop over his shoulder, pulled his best, and we pushed with the quants. The rope parted at a knot, and the man rolled head over heels. When he got harnessed again, we made her move and the sails having been lowered, we were towed down the river and moored outside some wherries for the masts to be lowered, in order that we might pass under the two bridges at Yarmouth. While the men were busy doing this, I went to the station with my wife and saw her off home. When I returned I saw the *Queen of the Bure* being carefully piloted through a crowd of wherries which were making up the shore with the wind and tide. Nothing but the most skilful steering on the part of my man saved her from being crushed. At last we were safely moored in the estuary at the lower end of Breydon Water, and opposite the Ale Stores. Then, while the man was making all snug, I went into the town to buy some beef-steaks and other necessaries.

After dinner I strolled on to the Britannia Pier, and when I came back to the yacht the sun was setting at the head of Breydon Water through a mass of rugged and uneven storm-clouds. The crimson light flamed through the jagged clefts, dying the edges of the clouds, but all powerless to tinge the centre mass, which was black as night. Down the long five miles of water the light streamed in lessening intensity until the wavelets lapped rosy red against the yacht and the quays. A wherry sailing up with the flood was first black and distinct against the nucleus of light, then shadowy and indistinct, then a mere black dot, and then the sunset seemed to swallow it up in its fiery throat. After a while the black clouds lay in a pale sky, the broad expanse of water lay cold and grey and silent, save for the cries of the sea-birds, and the weird night closed about the quays and the shipping, and I was glad to retire to my little cabin.

The next morning we were up early. There was no sign of the clouds of the previous night, and not a breath of wind. By seven o'clock we had the sails hoisted, and all snug, ready to cast off when a breeze should spring up. A big stout man belonging to another yacht which lay close to us had lent his aid in hauling up the mainsail. He put all his weight on to the halyard, but unfortunately there was a great quantity of slack, which he had not observed, and he accordingly sat down on the deck with a bump, which made the yacht shake from stem to stern.

At last the smoke from the houses bent away to the westward, and in a few moments there was a puff of wind from the east. We cast off, and stood for the middle of the stream to avoid a great dredger which stood right in the tideway. But just when we were abreast of it the wind dropped, and we were carried quickly and helplessly on to it by the tide. A smash seemed inevitable, but fortunately another puff of wind came, and enabled us to drift by without actually touching, and as the men on board the dredger had been smart in slacking their mooring ropes, we cleared them without any damage. And now the breeze blew steadily from the east, and we sailed before it up the Breydon Water, keeping in the wide channel which is marked out by posts at intervals on either side. Every now and then we seemed to run in advance of the wind, which would presently catch us up. When we got to the head of Breydon, where the Yare and the Waveney enter, my man said :—

“Look at those wherries up the Norwich River. They are coming down with a south-westerly breeze ; you’ll see the winds meet presently.”

And sure enough, when we had sailed a little further, our east wind failed us, our sails flapped, and then, when the sheets were hauled in, they filled with a breeze from the south-west.

On our left were the ruins of Burgh Castle, which were worth a close examination.

The railway swing-bridge at Reedham was opened for us, and as we passed through, a hail from the shore announced that my missing friend had turned up. We lay to for breakfast, and he came on board, laden with hampers of good things to eat, and oceans of worms, gentles, and groundbait, for he was an enthusiastic fisherman.

At first it seemed as if we could not find room for everything ; but a yacht is like a carpet bag, it has always room for something more ; and in a surprisingly short time we had everything neatly stowed away.

After breakfast we sailed up to Cantley, to see a match between three yachts for a cup. It was a very pretty sight. There was a nice breeze, but not too much for topsails to stand. The day was sunny, and the sky blue, and the shore was lined with yachts looking on. When the match was over we sailed back to Taylor’s reach, racing and beating another yacht by the way. It was a treat to sail on the broad waters of the Yare, after the rather narrow Bure. Here we had plenty of room and water, and no fixed bridges where masts had to be lowered. As both my friend and I knew the river up to Norwich very well, we had resolved to get at once on to the Beccles river. The Yare is wide all the way up to Norwich, and passes through very lovely scenery :—the woods at Bramerton, Postwick Grove, and Whitlingham, and Rockland and Surlingham Broads. The bream and roach fishing from Coldham to Reedham is excellent, and if he is tolerably fortunate, the angler will count his catch, not by the pound, but by the stone weight. Near Reedham there are some big perch, and there are plenty of pike in all the reaches. For bream and roach it is well to have a variety of bait, worms, gentles, and paste. They appear to like a little change. It is necessary to groundbait the spot where you fish. If the big fish are not well on the feed, you will be bothered by the little ones, which will be caught and have to

be thrown in again. If the big ones are however on the feed, you will have some capital sport ; but the sport is always spoiled to my mind, because one's captures are of no use. Very few people care to eat them. They are also covered with such horrible slime, that if you have not a cloth with which to handle them, you will speedily get covered with it also.

That night our lullaby was a loud chorus of frogs croaking in the marsh. It was like the noise of a distant rookery.

Near here, the River Ket flows in from Loddon.

The next morning the wind blew more from the southward. From Reedham, a straight canal, called the New Cut, and about three miles long, connects the Yare and the Waveney, and so saves a round of ten miles by Breydon Water and the fixed bridge at St. Olave's on the Waveney. We sailed along this Cut close hauled, starting before breakfast so as to save the tide. The flood tide makes along it from the Yare ; there is a high bridge at Haddiscoe Station, and as we passed through, a man held out a bag at the end of a stick into which we dropped eighteenpence, and called out the name of our yacht for him to book. This is the only toll to be paid on the three rivers. Then we got into the Waveney, a stream which sometimes has twenty feet of water close to the banks. We passed through two more swing-bridges (all these bridges are open, save when a train is due), and sailed on until we came to Oulton Dyke, a wide river connecting the Waveney with Oulton Broad, Lake Lothing, and the sea. Here we stopped to breakfast, and then to fish, admiring the while the peculiar tower of Burgh St. Peter's Church, a conical structure rising in steps and set on the side of a wooded hill. As the fish did not bite very fast, and were very small, we hoisted sail, and sailed some eight miles further to a reach below Beccles, where we lay to. This day's sail was the pleasantest we had ; there was as much wind as we could do with, without taking in a reef. After we got out of the tideway, the river was delightfully clear, and we could see shoals of small fish each time we neared the banks. The sky was of a deep blue, but the blue of the water was deeper, and the waves which rose on either side of us, and the eddies in our wake, were crested with the purest white, shining in the sunlight. The scenery was delightful, the wide marshes seemed full of motion—the motion of the reeds and grasses tossing in the wind ; of cloud shadows sweeping over them,

and of endless variation of colour. Picturesque groups of red and white cows and numbers of tall, grey herons, added to the beauty of the scene. The banks were fringed with reeds, shining like emerald and with a purple crown of feathery grasses on the higher bank beyond them. Then on board we had swift motion, and plenty to do, the snow white canvas strained to the breeze which filled it, the constant shifting of the sheets and the movement of the helm as we tacked, and the clever avoidance of passing wherries and yachts; all were pleasant and exciting and we were sorry when it was necessary to come to an anchor. From where we moored, the pretty little town of Beccles, set as it is among trees and on the side of a hill, looked to its best advantage.

Now that there were no ladies on board, we could take our daily dip from the side of the yacht, and we made it a point of honour to get in again without having resort either to a loop of rope or the accommodation steps; it could only be done, however, by men with long arms like ourselves. We would tread water rapidly and so throw ourselves out until we could grasp the rail on the waterways, then we would wriggle our legs up between our hands and over the rail with our feet against the cabin, then we would rest a bit to prepare for the tug of war, which was to raise ourselves on to the deck. This was the only way we could get on board without barking our shins or hurting our ribs, and it was not an easy feat. Those early morning and late evening bathes were delicious, and we felt as if we could swim miles. Nothing could beat them for physical enjoyment except the faculty we soon gained of being able to drop off into the soundest and sweetest sleep at any time of the day or night. Such sleep I shall not get again for a twelvemonth at least.

The next morning we sailed up to Beccles and went into the village to buy some bread, fruit, and methyated spirit for our lamp; then we turned into a barber's shop to have ourselves cropped, and my friend pulled out a plummet instead of a sixpence.

"Ah, sir! excuse me, but I see you are a fisherman. So am I. I am passionately fond of it and I have had some good sport in my time."

So we fell to chatting with him. He showed us the outline of a perch which, with another of the same weight, he had

caught in the Waveney, weighing three pounds. He told us that if the Waveney had a close time it would be the best river for rough fish in the world. It had great depth of water, pure water, and good feeding grounds, but it was netted shamefully. The summer before last a fishing smack came up from Colchester and *trawled* the river, taking bushels of big and little fish, and destroying all the spawn. They caught as many as ninety stone weight of eels in one week. Nor was the local netting any better. The river was swept by nets one hundred yards long and sixteen feet deep so that the very eels were scooped up from the bed of the river. Then this netting was practised in the early part of the year, before the weeds have grown up and so the spawn is destroyed as well as the fish. This is a burning shame, and reflects great discredit upon those landowners on the banks who have opposed a close time. An irritating part of the business is that they will not see what a suicidal policy they are adopting—killing the goose with the golden eggs.* The barber's information was nothing to what we afterwards heard of from many other people on the river.

Some years ago, the barber told us, he had caught eleven perch weighing two pounds each, with gudgeons, in a very short space of time, but that it was impossible to do so now.

The use of hoop nets for tench is very common at Beccles. Our man told us that he once took one up which had sixteen brace of very large tench in it.

In Beccles churchyard there is a very fine and curious old tower standing close to but apart from the church.

The morning had been very close and sultry and at mid-day a thunder-cloud stole up from the west, and we got back to the yacht in time to escape a drenching. The storm was very grand and impressive. As the rain continued we took to shelling peas for amusement and dinner, and I regret to say that my friend stole some of my peas to make his own heap appear larger, and also picked out the biggest pods to shell.

It did not finally clear up until six o'clock, and then, although there was not a breath of wind, we hoisted our sails and dropped very slowly down with the stream, whistling for a wind, and holding up our wetted forefingers trying in vain to distinguish a coolness on one side or another. At last out of

* Since the above was written an act regulating the fishing on the Rivers and Broads has been passed which will have a beneficial effect.

the golden sunset a light breeze came and took us three or four miles upon our way at a fair pace. Then it dropped, but there was still a slight air from the west, too light to ripple the water but sufficient to draw us gently along. The gloaming deepened, and the moon rose and by its mellow light we glided mysteriously between the dark reed margins which resounded with the splashing of water birds, or the plunge of an otter. The charm of the still night stole into our souls and we stood in the stern sheets impressed by its wonderful beauty, and chatting quietly. The broad marsh slumbered in the moonbeams, ripples of yellow light danced in our wake, always abreast of us there was a low continuous murmur as the wind out of our sails rustled in the reeds and now and then a light glimmered from some lonely house.

“Did you ever see a will o’ the wisp?” we asked our man.

“Yes, many a time before the marshes were drained as they are now. The last I saw was seventeen years ago. It was about ten yards from our wherry, flickering over a little pool, and we went close up to it and watched it.”

Some cattle scampered away from the margin and the man continued:—

“A mate of mine once thought he saw the devil and was terrible frightened; but it was a bullock which had got into the water and had pushed its horns and head just outside the reeds, on a bright moonlight night like this.”

As in a dream we glided along in the mellow moonlight, and after a sail, the charm of which will never desert me, we came upon Oulton Broad, across whose waters “one long track and trail of splendour” shot from the golden moon.

We took up a berth near the lower end of the Broad and soon were wrapped in a dreamless sleep. A strong breeze sprang up in the night and our anchor dragged and in the morning we found ourselves in dangerous proximity to some other yachts, so we had to make sail and take up another berth.

Oulton Broad is a very fine sheet of water containing many and large pike, perch, roach, and bream. The fishing is free, but is controlled by the courteous host of the Wherry Inn, Mr. Mason, who will only permit fair fishing. He can supply visitors with boats and bait, and the Broad is a favourite resort of anglers. We spent a good part of the morning sounding

for a gravel bottom, in the hope of catching some perch, but we were not successful. Nevertheless we caught perch, bream, and eels, but nothing of any size.

Wild geese bred on Oulton Broad last spring, and shortly after we left, shoals of grey mullet were to be seen disporting in its waters, but declining to be caught. The brown shrimp is an excellent bait in this water. Two miles below Oulton is Lowestoft, a pleasant watering place, and between these two places is Lake Lothing, a tidal piece of water connected with Oulton Broad by a lock.

My decreasing space warns me that I must omit the details which gave interest and variety to each day's cruise. On Monday morning we got under way by six o'clock, in order to save the tide up the North River, and after a gloriously exciting sail under a strong wind, we reached Yarmouth at nine o'clock, and were away again by mid-day, beating laboriously against the wind. We passed the night at Mautby, and the next day beat up to Horning, where at night we were joined by a number of other yachts, which were on their way to the regattas on Wroxham Broad, which were to take place on the Thursday and Friday. We were very gay at Horning that night, and we stayed there until mid-day on the morrow fishing. Two very fine yachts were there, rigged in the wherry fashion, and looking extremely comfortable boats. The gnats, or "mosquitoes," at night were rather a nuisance. In the night you heard a vicious buzz, and then a silence followed while the insect was regaling on some tender spot of flesh, unfelt for a few seconds, by which time the mischief had been done, and an irritating bump raised. The best preventive was to anoint one's face and hands, and sprinkle one's pillow with eau-de-cologne.

A clergyman's son whom we met at Horning, said that he had caught a perch which weighed five-and-a-half pounds, on a trimmer a short time previously. A night or two ago he had caught an eel of four pounds weight on a night-line. He had seen the professional eel-fishers set a night-line with eight hundred hooks on, and they caught three hundred eels upon it.

We had used all our bread, and we could not get any more at Horning. The baker would not be round until the afternoon, but there was a baker at Salhouse, so as we sailed past

Salhouse Broad, we went across it in the jolly, and walked to the village, where we got some new bread.

Wroxham Broad was gay with numbers of yachts of all rigs and sizes, sailing about or lying at anchor. Late at night the scene was very beautiful. Some fifty yachts were lying at anchor. The moon shone brightly on the still water and the lights of the yachts glittered in all directions. The sound of a piano which was on board one of the yachts came sweetly over the water, and merry talk and laughter resounded all over the Broad.

The next day was the regatta of the Norfolk and Suffolk Yacht Club and we had a number of friends on board. On Friday the Yare Sailing Club also held a regatta, the most novel feature in which was a wherry race in which seven started. And then on Saturday, the hottest day I ever remember, we sailed up to Coltishall and our cruise was ended.

It will not be amiss to give some information as to the cost of such a cruise. The hire of our yacht was two pounds three shillings a week, and the man's wages were twenty-two shillings and sixpence a week. The hire of yachts varies from three pounds a week (including the man), and of course you have to find the man with provisions. It will be seen that such a holiday is not an expensive one. The fishing is best in August and September, but the best months for the naturalist are June and July.

THE END.

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