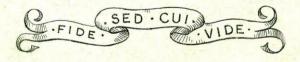
THE

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JUNE, 1906.

No. 9

School Notes.

HE great event of this term is the opening of the new wing of the Boys' School, of which a full account will be found on another page. The new rooms are a great acquisition, and not least, the School Library and Reading Room.

We gratefully acknowledge the kindness of Mr. and Mrs. Emmott in presenting to the Library the handsome corner seat and other furniture.

Will Old Boys please send information of their present addresses, occupations, and successes achieved in examination or otherwise, as the School Record is far from complete.

F. M. Roberts, H. O. Newboult, A. C. Horsfall have joined the School this term.

Term ends on August 3rd, and next Term commences on September 18th.

Opening of the New Laboratories and Workshop.

HERE was a large assemblage of boys of the Hulme Grammar School, Oldham, their parents, and friends, in the Hall of the School on Saturday afternoon, May 12th, 1906. The Earl of Crewe was present, and in addition to distributing the prizes won by successful scholars he formally opened the new wing which has been added to the building. Mr. A. Emmott, M.P., presided, and among others on the platform were Mrs. C. E. Lees, Mrs. Emmott, Mrs. Prodgers, Mrs. J. E. Newton, Rev. Canon Rountree, Rev. J. H. Humphrey, Messrs. G. B. Taylor, J.P., H. Booth, H. Wilde, A. G. Roby, G. W. Needham, J.P., A. E. Wrigley, J. Brierley, A. G. Pickford, M.A., M.Sc. (head-master), H. Winder, R. Taylor, and others.

The afternoon's proceedings began with a representation by scholars of scenes from "A Midsummer Night's Dream" and from "Les Fourberies de Scapin" (Moliere). In the last the character of the artful Scapin was very well taken by W. H. Hall, and Geronte and Leandre were in the capable hands of W. S. Booth and T. W. Faulkner respectively. The other parts were creditably rendered by H. Buckley (Argante), P. C. Jones (Octave), H. Hassall (Sylvestre), and J. M. Underwood (Carle).

Scenes from the delightful English comedy were presented with excellent spirit, and the acting, taken generally, reflected great credit on the boys and their tutor. Nick Bottom was given with vigour and much expression by J. Fletcher. The cast was: Theseus, Duke of Athens, C. Hutchinson; Hippolyta, Queen of the Amazons, J. Hughes; Lysander and Demetrius, gentlemen of Athens, H. Kempsey and A. R. Maw; Philostrate, master of revels to Theseus, F. Wolfenden; Quince, a carpenter. J. Lees; Snug, a joiner, R. Young: Flute, a bellows mender, W. Smith; Snout, a tinker, J. Buckley; Starveling, a tailor, V. Millington; Oberon, king of the fairies, T. G. Taylor; Titania, queen of the fairies, H. L. Mellor; Puck, or Robin Goodfellow, A. S. Jennings; Pease Blossom, Cobweb, Mustard Seed, fairies, E. E. Mellor, C. G. Varley, and R. T. Ebrey.

Mr. Emmott, before the prizes were distributed, said that it was a very great pleasure to him to be present, and to see that large audience of Oldham people, interested in what is and he hoped would increasingly become a most useful Oldham institution. This was a very interesting day in the history of the School. It was about 11 years since Lord Spencer,

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the Earl of Crewe's predecessor as Lord President of the Council, had visited Oldham to open that building. They were now met to open the most considerable extension to the building that had yet been made. It comprised a chemical laboratory, physical laboratory, new library, and a workroom. He must confess that although chairman of the governors of the School he had not been able to devote the time and attention he ought to the superintendence of the work. But it was quite evident that the work had not suffered at all on that account. and he was delighted with the appearance of the new rooms. The Girls' School was not represented there in an official capacity, and perhaps the girls might feel that these additions were pre-eminently additions for the most part more useful to the boys than to them. The governors did not possess a gold mine. He was afraid that the available spare funds were exhausted and more than exhausted by the new extension, but whenever any future extension was made the Girls' School ought on the next occasion to have the first consideration. Some alterations were badly wanted in the Girls' School, particularly a large room for art purposes. Mr. Emmott incidentally remarked that nowadays he was in a position in which he had to be very careful not to show any partisan feeling of any kind. Therefore, the only visits he could make to Oldham of a public character must be on non-partisan occasions. It gave him pleasure to be present, for there was no kind of work in which he had been concerned in Oldham that had given him so much pleasure and satisfaction as his work in connection with the School.

Mrs. C. E. LEES having, with a brief speech of welcome, presented a gold key to Lord Crewe as a memento of the occasion, his lordship with the governors and ladies on the platform proceeded to the extension, which was opened and formally inspected. Later Mr. Emmort mentioned that a portion of the cost of the extension had been provided by a legacy of the late Mr. S. R. Platt, J.P.

The EARL OF CREWE, addressing the assembly, remarked

that he had no hesitation in saying, and possibly Mr. Emmott might share his feelings, that it was pleasant once in a way to escape from the atmosphere of elementary education—breezy and perhaps even tempestuous—and to have the opportunity of watching what was being done in the calmer sphere of secondary education at a fine institution such as that. There was a note of regret mingled with pleasure, for they had been reminded by the chairman that eleven years ago Lord Spencer opened those schools. It was impossible on an occasion like that not to refer to one who was a very dear and honoured friend and colleague, and not to lament, as people of all classes and parties in the country had, he thought, lamented, that his services had through illness been lost to the country, to whose interests he was always so devoted.

Lord Crewe went on to say that he greatly admired the new building. He was greatly struck by the admirable and thoroughly complete and efficient equipment of the two new laboratories. He was also glad to see that they had found a home for the school library. However much might be brought home to them the necessities of technical and scientific education they must never forget general cultivation, one side of which could best be carried out by the intelligent use of a library. We were always hearing, and he was afraid we could not hear too much-because if not always pleasant it was undoubtedly for our profit--of the superiority in certain branches of education of the great German nation to ourselves. He might remind his hearers that in Germany this need for a general cultivation was more completely recognised, scientific nation though they were, than perhaps in any country of the world. It was the practice there never to specialise before it was absolutely necessary. Certainly on an occasion like that he was not going to enter into the vexed question of the study of the classics. It was a question which excited almost as strong feelings on both sides as the subject of elementary education to which he had alluded earlier. He was classically educated and had never regretted it. Other people thought differently.

Coming to the scientific side of the School training, he said that there were in the North of England and in Lancashire many industries in which a scientific training must be of the highest value. There many modern industries, of course, into which the study, not merely of elementary, but of the most advanced chemistry was necessary. In the business of engineering an early scientific training was almost indispensable. How far those connected with the great cotton industry recognised the need for a thoroughly scientific and lasting system of scientific education he was not quite certain. dared say there might be some difference of opinion among those connected with the trade on the point. He would like in reference to all industries to call attention to a point which was, it seemed to him, of the first importance, and quote some words from the report of the Departmental Committee upon the proposed Imperial centre for Technological Education in London. A great work was intended to be done there by bringing together in the closest proximity the most important technological institutions of the Metropolis and making something, it was hoped, equal to any scientific institution in the world. "It is to be noticed," the Committee reported, "that the German student begins his technical education at an age when the average Englishman, who is destined to take a leading part in commercial or industrial life, is just bringing his training to an end and is entering upon a business career. This fact is the one that has most impressed many of those who have gone to Germany to study her system of technical In the early days of their existence the schools which have subsequently developed into technical high schools admitted pupils from the age of fourteen, and the standard of admission was low, but with the recognition of the necessity of technical education of a more advanced type the minimum age of admittance has been gradually raised until in actual practice it has been found that many students cannot enter until nineteen. This means that parents have to be content that their sons must be dependent on them for support at a much later age than usual in England. . . . The bulk of the students are therefore distributed mainly between 19 and 25 years of age." He would leave these observations to speak for themselves.

He was very glad to know that so far as the Hulme School was concerned the age at which students remained had been raised. It had been 17 years, and was now 19 years. But he was quite certain that he would have the agreement of the headmaster and of the teaching staff if, after all, he said that could only be the second best. It was an admirable thing that boys should remain there until they were 10 years of age instead of leaving at 17 and going directly into business, but it was better still that they should remain until 10 and afterwards go to the university. That was the ideal at which they ought to aim, and he was glad to know that a considerable proportion of the students of Hulme School had gone to the university, many to Victoria and some to the older universities of Oxford and Cambridge. The moral of the extract he had just quoted was that the parent required to be educated just as much as the boys. There were still a very considerable number of people in Great Britain who did not think much of education, preferring the "rule of thumb" experience. time would come when the comparatively few people, as he hoped, who were left who thought that education was in the main rather a mischievous and misleading thing would be altogether extinct.

At the close of the prize distribution Mr. PICKFORD mentioned the names of the first two of their old boys to become professional men, G. C. Mort and Robinson. (Applause.)

Mr. Roby moved that a vote of thanks be given to the Earl of Crewe.

Mr. G. B. TAYLOR, seconding, said that at the school there was room for many more boys than those attending

at present. The only complaint he had was against the people who had children who should be there and did not send them.

Lord CREWE, in responding, took the opportunity of congratulating Mr. Emmott upon the high position he now holds in the House of Commons.

A vote of thanks to the Chairman, proposed by the Rev. Canon ROUNTREE and seconded by Councillor H. Whide was also carried.

PRIZE LIST.

School Examination.—Form I.—1st, W. S. Hartley; 2nd, J. M. Shaw. Form II.—1st, J. B. Hilton; 2nd, C. G. Varley. Form III.—1st, S. Dawson; 2nd, W. Tonge. Form IV.—1st, J. Buckley; 2nd, V. Jackson. Form V2.—1st, F. Kempsey; 2nd, A. Maw. Form V1.—1st, B. Platt; 2nd, W. Smith. Form VI.— Mathematics, E. Viner; English, W. H. Bagot: Latin, H. Hassall; French, W. Smith; German, B. Platt; Science, J. Fletcher; Drawing, C. Lawton.

Oxford Junior Local Examination, 1906.—Second class honours: F. Kempsey. Third class honours: H. Buckley, J. H. Eastwood, F. Goldthorpe, F. Schofield, F. Watson, F. Wolfenden, R. Young. Pass: W. S. Booth, J. Buckley, H. Burton, R. T. Grime, E. Hall, W. Jobson, P. C. Jones, H. Kempsey, J. G. Mellor, V. Millington, T. P. Robertson, J. M. Underwood, A. Maw.

OXFORD SENIOR LOCAL EXAMINATION, 1906.—W. H. Bagot, J. Fletcher, W. H. Hall, H. Hassall, M. Horsfall, C. Hutchinson, C. Lawton, B. Platt, W. Smith, E. Viner, and A. Winterbottom.

THE NEW EXTENSION.

The alterations consist of the complete remodelling of the boys' end of the School. Originally the chemical laboratory and lecture room was approached from a corridor which was

entered from the passage leading to the boys' entrance, and those rooms were in a way out of touch with the remainder of the School. Additional accomodation was urgently required, viz., a manual instruction room, physical and chemical laboratories, library, and office. In order to provide these rooms and to attach them to the existing building in such a way that the working of the School would be improved, the corridor leading to the old chemical laboratory has been removed and the main corridor of the School has been continued in a straight line to the Chamber Road end of the School, where a new entrance has been made with carriage approach thereto. On the easterly side of the new corridor the old lecture room has been altered and converted into a library, and the old chemical laboratory into a manual instruction room for 20 boys. On the westerly side of the corridor a bookstore and office and chemical and physical laboratories have been erected.

The chemical laboratory has balance and store room and the physical laboratory a dark room attached. Both laboratories are fitted and arranged on new lines in such a way that the lectures will be given in them, and the students can be carried through the various experiments without change of rooms. The physical laboratory can, by means of shutters, be converted into a dark room in a few minutes.

The physical laboratory has accommodation for 32, and the chemical laboratory for 30 students. The whole of the foregoing rooms can be overlooked from the main corridor. dressing-rooms for the boys, with foot-baths, &c., are in course of erection in the basement. A considerable amount of subsidiary work has also been done, such as remodelling and increasing the heating apparatus throughout the building, also in the installation of electric lighting in place of gas and in road making and improving the grounds.

The builders' work has been carried out by Mr. Ed. Stephenson, of Oldham, with the following sub-contractors:—

Joiners' work, Messrs. W. Rose & Sons; masons' work, Mr. A. Mackay; slating, Mr. R. Fletcher; plumbing and painting, Messrs. S. Bates & Son; plastering, Mr. Glynn; heating and electric lighting, Mr. W. Caton. The whole from plans and under the supervision of the architects, Messrs. Winder & Taylor, of Oldham.—Reprinted from Oldham Chronicle.

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BURY GRAMMAR SCHOOL, Jan. 24th, Away.—In this match we were without the services of Buckley and Sutcliffe, Horsfall and Ashton taking their places. As in the previous match with Bury we were completely outplayed. During the first half Bury scored 5 goals, and in the second 4 more. Our only goal was scored by Hall in the first half. Scorer: Hall.

Warrington Grammar School, Feb. 24th, Home.—After the good form shown in the previous match we hoped for better things, but in vain. Warrington outplayed us, and scored 3 goals in the first half, and in the second half 4 more. Smith scored our only goal. The combination shown by the School was very poor, and the backs never seemed able to hold the visiting forwards. Score: Smith.

Manchester Grammar School, 2nd XI., March 3rd, Home.—There was a great improvement shown in this match. Soon after the commencement the School scored twice, through Hall and Hutchinson. After this the game was more evenly contested, and our opponents tried hard to score, but could not break through our defence. Directly after the commencement of the second half we scored 2 more goals in quick succession through Hall and Hutchinson. Just before time Hall scored again from a penalty. Scorers:

Hall 3, Hutchinson 2.

MASTERS, Jan. 27th, Home.—For the first time this season the School played Millington in goal, Young taking his usual place among the forwards. We were without Hall, but a capable substitute was found in Sutcliffe. The School played much better than they had done for weeks, and soon broke through their opponents' defence. In the first half we scored 5 goals through Young 2, Hutchinson 2, and Buckley; and in the second 3 more through Young, Sutcliffe, and Hutchinson. Our opponents scored their only goal in the second half. Scorers: Young 3, Hutchinson 3, Buckley 1, Sutcliffe 1.

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GOAL SCORERS:—Hutchinson, 9; Hall E., 7; Young, 5; Buckley, 3; West T., 3; Smith, 2; Sutcliffe, 2; Mr. Wight, 1; Total, 32.

CHARACTERS OF TEAM.

- MILLINGTON (Goalkeeper)—By no means brilliant, but played a steady, useful game. Weak at "throwing away."
- Burton (Back)—Sound and reliable; a good kick and tackler, but apt to kick too high.
- MILWARD (Back)—Not so good as his partner, but is improving. Must learn to "place" the ball.
- FLETCHER (Half)—A thorough hard worker; tackles well and feeds his forwards.
- SMITH (Half)--Rather slow; works hard, but does not help his forwards enough.
- Sciville (Half)—Not so good as last term; knows the game, but at times rather slack.
- HALL (Centre Forward)—Has pace and dribbles well; a good shot.
- Buckley (Right Outside)—A tricky dribbler; gives away too many free kicks.

SUTCLIFFE (Left Inside)—Slow, and weak in tackling; will improve.

Young (Left Outside)—A great improvement on last term; in fact, quite dashing and energetic.

HUTCHINSON, Capt. (Inside Right)—Speedy and clever at his best; gave but rare glimpses of his true form.

Debating Society Notes.

JOHN BURNET BACK THE

HE Debating Society brought another session to an end on February 26th. For the last month the Lower Fifth Form were admitted to membership, forming a welcome addition to its numbers. On the whole the debates were quite up to the standard of the previous session. Our annual tea and "General Election" was a great success.

On December 11th Booth submitted "That Trades Unions are an Evil to the Country." He declared that the Unions were mismanaged and formed a menance to employers, besides preventing honest men who were non-unionists from obtaining employment. Fletcher, who opposed, declared that Trades Unions prevented the complete triumph of capital over labour, besides doing much good in times of distress by the sick clubs, &c. Mr. Ellison, Kempsey, Smith, Young, W. H. Hall, and Hassall also spoke. The motion was carried by 5 votes to 3.

On Jan. 29th the Headmaster gave a paper on educational expenditure, under the title of "The Cockerton Judgment."

On February 5th the motion, "That Assassination is Justifiable," was brought forward by H. Kempsey, who said that it was better that one man should die than that thousands should suffer death, and tortures worse than death. Tyrants

deserved no mercy and should be killed. In opposing, Horsfall said that we erring mortals could not judge of what was right. If it was Divine will to create a tyrant, we should not oppose it by destroying him. Mr. Ellison, Smith, W. H. Hall, Fletcher, Hassall, Lees, Young, and Booth also spoke. The motion was lost by 9 votes to 7.

On February 12th Young proposed "That Vaccination is Beneficial to Man." In a fine speech he pointed out that statistics easily prove that vaccination is really beneficial. He spoke of several cases which had come under his notice. Platt, in opposing, declared that in many cases vaccination was really harmful, even giving smallpox, while in most cases the benefit was doubtful. Vaccination had not come up to its claims. Mr. Ellison, Fletcher, H. Kempsey, Lees, Smith, and W. H. Hall also spoke. The motion was carried by 21 votes to 6.

On February 19th was our annual tea, after which a "Parliamentary Election" was held.

On March 5th a debate was held on the subject "That Vegetarianism is Absurd." Greaves, in opening the debate, said that meat-eating countries were superior to vegetarian countries. Meat extracts were acknowledged to be the most condensed nourishment. Lees, in opposing, said that vegetarians, as a rule, were healthier and longer lived than meat eaters. Meateating countries were not always the best. Besides being far more conducive to health, vegetarianism was far more humane, not involving the slaughter of animals. The debate was sustained by Young, Smith, Hassall, Fletcher, and Platt. The motion was lost by 14 votes to 7.

On March 12th, the last meeting of the session, Mr. Webber gave a paper, "A Few Lessons from Germany," which dealt at full length with some industrial problems. N. H.

Natural History Society Notes.

GAIN we are pleased to announce a period of successful growth for this Society. Several new members have been added, and Smith has been elected Secretary in place of Lowe. This year the general committee consists of the Headmaster, Mr. Pym, Mr. Wight, Hutchinson, Smith, Hall W. H., Fletcher, Kempsey F., Millington, and Kempsey H.

On Thursday, Dec. 7th, the annual tea and exhibition took place. This function had been looked forward to with eager expectation for some time before, and even the highest hopes were realised. Mrs. Pickford, Mrs. Pym, and Miss Hyde kindly took charge of the arrangements for the tea, which did them ample justice. After the tea a vote of thanks was proposed by Smith and seconded by Lowe to the ladies for the care they had bestowed on us. The society then adjourned to "Big School," where a most interesting exhibition of specimens was on view. We must here take the opportunity of thanking the many contributors to the exhibition, and especially Mrs. Hutchinson, whose splendid collection of dried and pressed New Zealand sea weeds was one of the chief sources of interest in the exhibition. Several side-shows were also carried on by the members of the Sixth Form, and many experiments in electricity and other branches of physics were demonstrated.

The prizes were awarded as follows:—Hutchinson won the Headmaster's prize with a set of photographs. Kempsey H. won Mr. Pym's prize for a collection of birds' eggs and butterflies. H. and J. H. Noble won the Society's prize for the arrangement of a set of fossils.

In the course of the evening the Headmaster gave a short lecture on "Radium," which was naturally appreciated highly. A series of slides illustrated his remarks. Mr. Wight also

showed a collection of slides on Plants, and the function pleasantly terminated by a set of pictures of Holland, Fletcher kindly explaining the most apparent features of the pictures, and surrounding the foreign views with an air of mystery and doubt.

We have had our "Arbor Day," and owing to our efforts on that day we hope that the School field will be one of the pleasantest and shadiest spots in Oldham. Mr. Pym and Mr. Wight have generously provided 100 trees of four kinds:—Ontario Poplar, Italian Poplar, Laburnum, and Lilac, and they have been planted in a triangle at the corner of Windsor Road and Chamber Road, and all along the Windsor Road side of the field.

We were fortunate in choosing for our tree-planting day March 16, the first day of the "Beautiful Oldham" Bulb Show. Canon Morley Stevenson, of the "Beautiful Warrington" Society, was opening the show, and he kindly came on to the School from Werneth Park and gave us a short, thoughtful address, pointing out the good we were doing to our town by such tree-plantings, and encouraging us to go forward with such work. Mrs. Higgs also emphasised the importance of such a society as "Beautiful Oldham" Society in our midst. The appreciation of the School was fittingly shown by the hearty cheers given for Canon Stevenson and Mrs. Higgs, and we then adjourned to the field, where the work of tree-planting was proceeded with.

Mr. Pickford planted the first tree, then the masters and boys followed, each taking charge of a tree. The two kinds of poplar have opened out very well, and the laburnums have bloomed surprisingly, but owing to the fact that the lilacs were planted too late they have not bloomed, and probably will not do so till next season.

A paper was read on March 23rd by Kempsey F. on the "Protective Colouring of Birds and Eggs." The paper was

highly appreciated, and a vote of thanks was proposed by Smith and seconded by Hassall, and carried by the meeting. In conclusion, Mr. Pym requested that the paper should be placed among the manuscripts of the Society, and this request was kindly granted.

On April 4th the Society went on a visit to Heaton Park, under the guidance of Mr. Pym. A pleasant afternoon was spent visiting the various spots of interest in the grounds. Unfortunately, however, owing to the cold weather experienced for some time before and the earliness of the time, not many specimens were obtained. The photograph section, however, was favoured with many interesting views, and the day favoured their operations.

The Aquarium has at last found a place of rest in the Library, and affords convenient opportunities of studying pond life, with which it is well stocked.

The gardens on the south side of the School are in full bloom, and lend a pleasant aspect to the side of the new buildings.

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Old Boys' Notes.

EARTY congratulations to Messrs. J. A. Brierley and T. Wellock, who have successfully passed the final examination of the Incorporated Law Society, also to Mr. F. G. S. Whitmore, who took his degree of Bachelor of Arts, Oxford, some time ago. All Old Boys will wish them every success in their future careers.

The third annual picnic took place on the 16th June last to Whaley Bridge, thence walking to Buxton, through Taxal,

and up the Goyt Valley, which, at this time of the year, is looking at its best. The number present was very good, and the party thoroughly enjoyed themselves.

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The Headmaster's circular suggesting that each Old Boy should subscribe to form a Library has been, we believe, very well responded to, and it was a happy thought of his to secure in this way a permanent connection with the School by placing the name of each subscriber in a book, and it is hoped that the efforts made by the Old Boys to render the Library a useful institution will be worthy of them, and that there will be very few missing subscribers.

Old Boys' Colours are now being selected, and further particulars will be forwarded to each member.

"General Election."

T is the custom of our Debating Society for one evening during the Session to relax from its more serious labours and to become frivolous. This winter, however, the influence of "outside" events was too strong, and instead of relaxing into frivolity the members of the Society braced themselves up and plunged into the strenuous exertions of a "General Election." Feb. 19th was the date fixed for the momentous event.

Mrs. Pickford thoughtfully took care that before the actual struggle began all parties should be fortified for the exhausting labours before them by partaking of an excellent tea. Representatives of all shades of politics showed their appreciation of this kind forethought, firstly by doing justice to the good things before them, and secondly by passing a unanimous vote of thanks to Mrs Pickford. Then the fight began in grim earnest. Election fever was at its height. Keen political discussions were carried on by politicians in embryo. The walls were placarded with free advice:—

Vote for X and a Big Loaf. Vote for Y and No Chinese Slavery. Vote for Z and Bigger Wages.

Six anxious candidates canvassed, and met with promises of votes, which had they been fulfilled would have gained for them the top of the poll. As yet no cases of bribery have come to hand, but it is expected that the sitting members will be unseated next election. Mass meetings were held in the classrooms, at which prominent members of the Cabinet and House of Lords, who curiously enough looked very like the masters, harangued the free and independent voters of Oldham. One of the candidates was playfully (?) locked in a classroom, whence he escaped at the imminent peril of his neck through a window, aided by two of the Conservative candidates. At 7 30 p.m. a mass meeting was held in the Hall, presided over by the Returning Officer (the Headmaster). Each candidate then addressed the general public in a more or less eloquent strain, and answered questions as best he could. Balloting then took place, with the following result:-

Votes.	Votes.
Lees (Liberal) 19	W. H. Hall (Conservative) 10
	Young (Labour) 8
Fletcher (Chamberlainite) 10	Hassall (Unionist F. T.) 4

A concert was then given in the Recreation Room, in which Messrs. Pym, Ellison, and Ingham, with Lees, Underwood, and Smith took part.

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Protective Colouring in Birds and their Eggs.

N a paper of this description we must first consider what protective colouring is and why it is necessary. A large number of our English birds are of such a colour that when close to some particular object they closely resemble

it. For instance, many birds resemble dry fern, grass, stones, or the bark of trees. This colouring is necessary to protect them from their enemies as they have not strength enough to protect themselves. The chief enemies of birds are other birds—hawks and owls, which feed on smaller birds, and jays, magpies, crows, rooks, and so on are very fond of eggs. Stoats, weasels, and rats are often very destructive to bird-life. We must next consider why this protective colouring is necessary to some birds and not to others.

As a general principle it may be said that while all birds which build their nests in open and accessible situations require and are supplied by nature with a sober colouring; all light and easily distinguished birds choose either inaccessible or dark places for nesting. This is the general principle, there are, of course, exceptions but not many. The shelduck, our most brilliantly coloured duck, chooses as its nesting places holes in the ground, chiefly rabbit burrows, or holes which it digs out for itself. It is essentially a sea-bird, spending most of its time on the mud flats, and nesting in the sand-banks close to the shore. The wild duck, or the contrary, is of a brown colour and builds its nest in exposed situations. It closely resembles the dry grass or heather amongst which it nests; but the mallard or wild drake, being brightly coloured, throws off during the nesting season its bright feathers for a coat like that of the duck, resuming its more brilliant colours in the autumn. This is done so that the attention of its enemies may not be attracted to its nest

In northern countries, during the summer when there is little or no snow, the ptarmigan is brown, but it changes its coat to white during the severe winters. The same may be said of the majority of birds in artic regions. But a large number of our British birds always have a sober colouring. The woodcock, although beautifully marked and golden brown in colour, is very difficult to find in dry fern, its favourite resting place, its feathers so closely resemble it. The partridge when feeding on stubble

or fallow ground is almost impossible to distinguish, its colours so nearly approaching to that of the ground. It has the habit of crouching or squatting when danger is scented, almost entirely disappearing from view. The nightjar is exactly the colour of the bark of a tree covered with moss and lichen, and when resting on a branch the bird looks just like a part of it, even in the broadest daylight. It is characteristic of this bird that it sits lengthwise not across a bough, thus being more effectively protected from view. The barn owl, because of its light colour, builds in holes in trees, in barns or other dark places; but on the other hand the short-eared owl, being brown, and trusting to this protective colour, builds on the ground in fern or marshes

Many of our brightly coloured smaller birds also build in holes in trees or in thickets where it is difficult to get to the nests. Good examples are the woodpeckers, which nest in the interior of old trees. They generally choose hollow trees, but often cut out holes for themselves, often using the same nesting place year after year. The bullfinch chooses as a rule the thickest thorn it can find, where it is often hidden and generally difficult to reach. The long-tailed tit, being a light coloured bird with a very conspicuous tail, has a roof to its nest which completely covers the bird while sitting. The crows and magpies build in the tops of high trees, where they are practically free from molestation. The same may be said of the majority of hawks. Many sea birds, being such a light colour, build on cliffs where, although they may be seen, it is impossible to reach them. The puffin does not nest on cliffs, but like the shelduck, in rabbit burrows, often turning out the rightful owner.

As a rule it may be said that all birds which have a protective colouring are close sitters trusting to their sober colours not to be seen while on the nest and thus protecting their eggs. The hen pheasant may be touched with a stick without leaving the nest. Birds with bright feathers leave their nests on the slightest approach of danger, the eggs in this case

generally protecting themselves by their own colouring. The terns and plover lay their eggs in a small hollow in the ground or shingle, making no nest, and owing to their light colouring are easily seen while sitting. But directly danger approaches, even if at a long distance, the birds leave their eggs. This is a case in which the eggs have a protective colouring of their own. Terns' eggs closely resemble the shingle amongst which they are laid, and plovers eggs are like the soil which surround them. Cuckoo eggs have always been a mystery to scientists. Their eggs are generally similar in colour to those amongst which they are laid, and as the cuckoo lays in so many different kinds of nests, it is a marvellous thing that its eggs should be so nearly like those of the bird in whose nest it lays. It usually choses the nest of robins, hedge-sparrows, sedge-warblers, titlarks, and redstarts.

The nightjaw only lays two eggs, and lays these on the ground amongst gorse or heather without a nest of any description. These look like stones lying on the ground, and are easily taken as such. Oyster catchers' eggs are laid on the bare rock, and look also very much like stones.

But many eggs are coloured to represent dry grass, fern, or heather. Curlews' eggs are difficult to distinguish from heather, and it always requires a careful search to find larks' or pipits' eggs in a grass field owing to their colour. The pheasant does not trust to the protective colour of its eggs, but when it leaves the nest covers them over with grass and fern so that it is very difficult to find them. The wild duck and partridge do exactly the same thing. Birds which have white or light-coloured eggs generally lay them in some hole or dark place. Swifts build under the eaves of houses, nuthatches in holes in trees, and kingfishers in holes on the banks of streams.

All colouring of eggs is not used for protection. Guillemots lay only one egg, and as the eggs on a cliff are clustered so close together, each bird must have some

means of distinguishing its own. This accounts for the difference in colouring in guillemots' eggs, no two being exactly alike. They tell their own eggs by its particular colour.

I hope I have said enough to show what an interesting branch of the study of bird life this is, and I can recommend you all, whenever possible, to watch birds, it will make your holidays pleasanter, and the country instead of being slow will always have something new to show you, and make your stay there more enjoyable.

F.K.

The Renaissance.

HE momentous era marked by the passing of the Roman

Empire consequent on the victory of Christianity is a very notable feature in history. Equally important, farreaching, and notable is the mighty movement known as the Renaissance—a term applied to the revival of learning which so profoundly influenced the minds, thoughts, and actions of men in the fifteenth and sixteenth centuries.

In 1453 the Turks captured Constantinople, then the seat of learning in Eastern Europe. The Greek scholars fled westwards to Italy and settled in Florence. Here their living knowledge of the Classics stirred the thoughts of the people, whose energy became diverted to and exerted in the cause of letters. At this time the study of the Greek and Latin Classics was revived, the poetry of Homer, the drama of Sophocles, the philosophy of Aristotle and Plato being resurrected and reendowed with life. From Florence, the centre of the intellectual revival, the exiled Greek scholars were the means of dispersing the classical literature over civilised Europe. To this place came foreign scholars, Grocyn, Linacre, and Colet, who wished to learn of the Florentine teachers.

Linacre, by his translation of Galen, revived interest in

the study of medicine. Colet, imbued with the spirit of the New Learning, initiated and furthered its influence in raising the moral and religious life of England, and awakened a fervent Christianity. The Italian studies of Greek enabled him to unlock the Gospels and the New Testament, and his teaching of the practical religion of these gave the peculiar stamp to the theology of the Renaissance.

The timely and valuable invention of printing by Caxton facilitated and hastened the spread of the works of the Latin authors, and made them accessible to every student. "For the first time," says M. Taine, "the people opened their eyes and saw." Art, science, religion, literature, architecture, all were attacked and benefitted by the New Learning.

Among the many benefits of the Renaissance was the establishment of schools and colleges. Education was reformed and grammar schools were founded in considerable numbers by the Tudor sovereigns. This ensured the spreading of education throughout England, the aim being the union of religion with sound learning, including the two classical literatures. The Parva Logicalia gave place to Greek. The higher education of the country was vastly extended, and improved and flourished greatly.

The narrow and mediæval notions which prevailed previous to this time were replaced by broader views. A movement which led to the Reformation was commenced in Germany by Martin Luther, but did not reach England until a few years later, though, of course, Wyclif had sown the seeds and prepared the way for it.

There came a gradual breaking away from the traditions of church and state. At the same time a sturdy and independent spirit was developed in the people as evidenced by the voyages and daring achievements of Sir Francis Drake and Sir Walter Raleigh.

The effect of the Renaissance on England is very distinctly marked by the literature of the time. Moore, Marlowe, Pecle, Greene, Shakespeare, and Ben Johnson were the best writers of the period, and at the beginning of the seventeenth century England's literature was and still is the grandest and greatest the world has ever seen. W. H. H.

Our Coal Seam.

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S we are all aware, since last September mighty mysterious forces have been at work in our midst; the results of their Titanic efforts are now apparent in our new laboratories and new dressing rooms downstairs.

But while the giants still wrestled in the bowels of the earth they made a discovery which will for ever be of interest to the School. In excavating in the boiler house a very fine coal seam was brought to light. The coal is good, samples of it burning very well,—a pure rich velvety black to the eye, hard and smooth to the touch. On the Common Room fire it spluttered and blazed bravely, and in the smoke we saw pictures—an Ingle Nook—chestnuts roasting—a merry group at snapdragon—mistletoe. It was a heartening picture and we blessed our coal. But the smart of the smoke is in our eyes.

We have wandered far from the scientific aspect of this discovery. For the sake of those with a passion for statistics we give the following figures:—

The total depth of the excavation was about 8 feet. The seam runs from east to west, having a dip, roughly speaking, of r in 5. The strata are extremely well differentiated. The first 5 feet down are sandstone, which gets very shaley at the bottom, then we came to 6 ins. of coal. The next stratum consists of clay 3 ins., then we get, in order, coal 7 ins., clay

6 ins., and at the bottom, extending down we know not how far, coal 9 ins. This clay, according to the researches of VI Form, is fairly rich in alumina.

By expenditure of much patience and 14 plates at least two good negatives were obtained. Enlargements were made from these and through the Natural History Society the School will possess a permanent record of this interesting discovery. Photographs may be had from Mr. Wight, small mounted 6d, each. There are a few copies of the enlargement at 3/- each.

Magazines Received.

The Editors acknowledge with thanks the receipt of the following Contemporaries:—The Whitgiftian, The Boltonian, The Pincerna, The Hulmeian (Manchester), The Leodiensian, The Savillian, and Bury Magazine.

