

A SQUIRREL'S NEST.

ST. JAMES' GAZETTE.

I had long known there must be a squirrel's nest in the big tree at the corner of a certain avenue, for I have often remarked split shells of hazel-nuts laying about loosely at its roots; and nut-shells split in such a fashion always indicate the presence of a squirrel. There are three creatures in England that largely feed upon filberts—the squirrel, the field-mouse, and the nut-hatch; and when you find an empty nut you can easily tell which of the three has been at it by the way they each adopt in getting out the kernel. The squirrel holds the nut firmly between his fore-paws, rasps off the sharp end by gnawing it across, and then splits the soft fresh shell down longitudinally with his long front teeth; exactly in the same way as a plough-boy splits it with a side-jerk of his jack-knife. The field mouse presses the nut against the ground with his feet, and drills a very small hole in it with his sharp incisors, through which, by turning the shell round and round in his paws, he picks out the kernel piecemeal. The nut-hatch, having no paws to spare, fixes the filbert in the fork of a small branch or the chink of a post, and pecks an irregular breach in it with his hard beak; the breach being easily distinguishable from the neat workmanlike round gimlet-hole made by the field-mouse.

But although I knew the squirrel was there by circumstantial evidence, I had never seen him till after the great storm tore up the tree, roots and all, and strewed it, a huge ruin, right across the face of the park close by the gate-house. Even then he did not at once desert his home, before the labourers began hacking off the branches; when he quietly betook himself with his family to a neighbouring oak, whither he has since transferred by night the scanty remainder of his spring hoard. The relics of the hoard are still to be seen in the abandoned hole, a deep recess where a gnarled bough had made a natural scar, improved upon with careful art by many generations of squirrels. There are acorn-shells, split shells of chest-nuts, beech-mast, and other mouldering spoils in plenty—the ancestral shards of many a winter feast. Indeed, it is curious how the trees and the animals have managed in this matter so cleverly to outwit each other in the see-saw of continuous adaptation. For the nuts have acquired their hard shells to get the better of the squirrels; and the squirrels have acquired their long pointed teeth to get the better of the nut-shells.

Yet even at the present day, when the balance of victory apparently inclines for the moment to the side of the squirrel, the trees are not without their occasional revenge: since some nuts either prove too hard for the depredators or are forgotten in the abundance of supplies; and so it has happened that, in certain recorded cases, the existence of young seedlings in wild places has been demonstrably traced to an abandoned hoard, which has afforded a good supply of rich manure to the germinating embryos. It is odd, too, how general among the rodents is this instinct of laying by supplies for the winter, due, no doubt in part to the exceptionally imperishable nature of their chief foodstuffs (for nuts, grains, and roots do not decay quickly, like fruits or meat), and in part to the usual close similarity in their surroundings and mode of life. We can hardly regard it as a habit derived from a single common ancestor, because it appears so sporadically, and so many related species are wholly wanting in it. Most probably it has been independently evolved in the squirrel, the harvest-mouse, the rat, the field-mouse, and the beaver, from the fact that in each group alike those who manifested it most would always best survive through the chilly and foodless northern winters. On the other hand, the storing instinct is sometimes replaced among allied animals by other instincts almost equally remarkable: as in the case of the dormouse, who gets over the same difficulty by fattening himself most liberally during the summer, and then sleeping away the winter so as only to use up the irreducible minimum of foodstuff in the absolutely indispensable vital actions of the heart and lungs.

From the point of view of mere survival, it would matter little whether any particular group happened to fall into the one practice or the other. It is very noticeable, however, that while the sleepiness of the dormouse has fostered, or at least has not militated against, a stupidity as great as that of the guinea-pig or the tame rabbit, the more active and provident habits of the squirrel and the beaver have fostered an amount of intelligence extremely rare among rodents, or, indeed, among animals generally.

I once kept a tame squirrel for some months, not in a wretched little tread-mill cage, but loose in my rooms; and in affectionateness of demeanour, as well as in general cleverness of perceptions, it certainly surpassed a good many dogs that I have known. Doubtless the habit of storing food grew up at first, as the west-country proverb says, more by hap than cunning. It may have originated merely from the thoughtlessly greedy practice of carrying home more food at a time than was needed for immediate consumption. Still, though the custom need not have been deliberately intelligent in its origin, it must have tended to develop intelligence in the animals displaying it; and even now that it has hardened into an inherited instinct, it may often be a very conscious bit of prevision indeed with old squirrels who have seen more than one winter, and who know that nuts or berries cannot always be obtained with equal ease. At any

rate, the fact that squirrels, rats, and beavers are now very clever animals is undeniable; and there is every reason to believe that their cleverness has been partly brought out by their provident habits.

Another thing that probably adds to the physical basis of intelligence in squirrels is their possession of a pair of paws which almost serve them in the place of hands. Mr. Herbert Spencer has pointed out that many of the cleverest animals are those which can grasp an object all round with some prehensile organ. Such animals, in fact, are the only ones that can really quite understand the nature of space of three dimensions. The apes and monkeys with their opposable thumb, the elephants with their flexible trunk and its finger-like process, the parrots with their prehensile claws, are all instances strictly in point. Even among the usually stupid marupials, the opossum has a true thumb to his hind foot, which he uses like a hand, besides possessing a very flexible tail; and the opossum is not only proverbially cunning, but he also has alone succeeded in holding his own among the highly developed mammals of America, while all the rest of his kind are now confined to Australia, their competitors elsewhere having been killed out without exception during the tertiary period by the fierce competition of the larger continents.

Whenever we find a clever animal, like the dog, without any grasping power, we also find a large development of the sense of smell, which may be regarded as to some extent compensatory. But it must never be forgotten that the cleverness of the dog has been greatly increased by long hereditary intercourse with man, while the cleverness of the elephant, the monkey, and the opossum is all native and self-evolved. The squirrel's paws stand him in almost equally good stead. For though he has no opposable thumb, he can hold a nut or a fruit between them, rolling it about or adjusting it meanwhile; and his teeth also serve as regular tools, which further enable him to manipulate an object held in the paws almost as well as any other animal except the apes and monkeys.

It is observable, too, that his tail belongs markedly to one of the two types common among forest-tree haunting creatures. Those which crawl or hang among the boughs have generally prehensile tails to aid them in grasping the branches: those which run and leap from tree to tree have generally bushy tails to aid them in balancing themselves, and to act as a sort of aerial rudder. In the flying squirrels and many other similar exotic types the use of such tails as a parachute is supplemented by extensible folds of loose skin stretching between the legs or the fingers.

A group which shows so much variety of specialisation for its peculiar functions is likely to be an old one; and in fact the squirrels rank among our oldest surviving indigenous mammals. As a class they date back as far in geological time as the lower miocene; and even our English species must have inhabited this country, practically unchanged in appearance or habits, for many thousand of years, except when driven temporarily southward by stress of passing glacial periods.

OUR CHESS COLUMN.

All communications intended for this Column should be addressed to the Chess Editor, CANADIAN ILLUSTRATED NEWS, Montreal.

The annual meeting of the Montreal Chess Club took place on Saturday last, October 7th, at the Gymnasium, Mansfield street. Dr. Howe presided, and there was a good attendance of members.

The report of the Secretary, J. Henderson, Esq., showed that the club numbered twenty-five members, and that the funds were in a satisfactory condition, leaving a small balance in hand. The most important subject connected with the operations of the club during the past year, independent of its regular weekly meetings, which were well attended, was the part taken by some of its members in the Congress of the Canadian Chess Association, held at Quebec in Dec. last. After the reception of the report, the following officers were elected for the ensuing year:

President, Dr. Howe.  
Vice-Presidents, Thomas Workman, Esq., and W. H. Hicks, Esq.  
Secretary, J. G. Ascher, Esq.  
Council, Messrs. J. Barry, J. Stirling, and J. W. Shaw.

A vote of thanks was then tendered to J. Henderson, Esq., the retiring Secretary, for his indefatigable exertions during the last three years to promote in every way the best interests of the club.

The subject of the annual meeting of the Canadian Chess Association in Montreal next December was then taken into consideration.

The Secretary of the Association, J. Henderson, Esq., stated that a preliminary meeting of the Managing Committee would be held in Montreal in the course of a few days.

A subscription list to meet the expense of the Congress was then opened, which amounted to seventy dollars at the close of the meeting.

The match between the amateurs of St. Louis and Mr. Max Judd, at the odds of a Knight, has been concluded, and the former have learnt what patience and perseverance may accomplish.

We would now advise them to keep on improving their play till they are able to challenge their formidable antagonist to another contest, on condition that they receive the odds of Pawn and move. If every chess club had a member possessed of the skill of Mr. Judd, and who, like him, would use it to influence the players around him, what a good thing it would be for our noble game!

THE AMATEURS DEFEAT MAX JUDD.

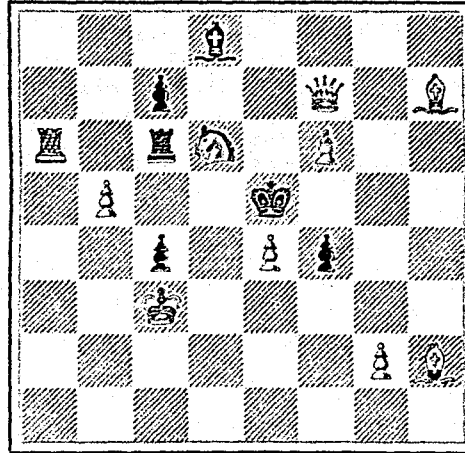
It is now the amateurs' time to rejoice. After a third engagement with Mr. Judd at the odds of a knight they have finally succeeded in scoring a victory over him. Messrs. Bird and Merrill each played their third game and won it—making the score 14 to 8 in favor of the amateurs. Mr. Judd should feel highly complimented on the result, because ten years ago

when he first came to St. Louis to try his fortune there was only one player that could be found to venture a game with him at the odds of a knight. Now at least twenty-five can be named who are as good as he who contended with him a decade ago. Year by year chess has increased in St. Louis until she will compare favorably with any other city in the Union, and in losing this match Mr. Judd must not imagine that he has lost any of his wonted skill, but must admit that the St. Louis players, under his excellent instruction and careful guidance, have risen above mediocrity. They rank equally with those of other cities, and, having proved their ability by their works, they deserve great credit for having by perseverance attained the rank of strong players.—Globe-Democrat.

PROBLEM No. 402.

By G. J. SLATER.

BLACK.



WHITE.

White to play and mate in two moves.

SOLUTION OF PROBLEM No. 400.

- White. 1. P to K3. 2. Mate acc. Black. 1. Any.

GAME 52TH.

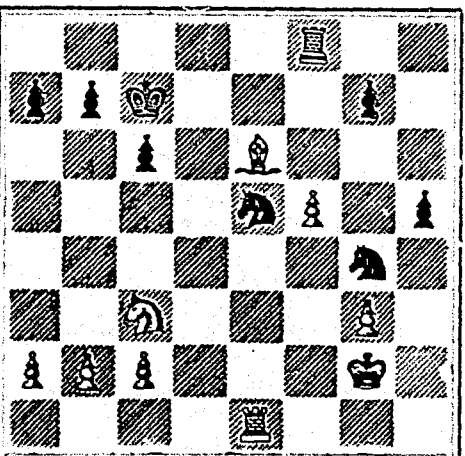
Played in the Vienna Tournament between Messrs. Schwarz and Mason.

WHITE.—(Schwarz.) BLACK.—(Mason.)

- 1 P to K4 1 P to Q4
2 P takes P 2 Q takes P
3 Kt to Q B3 3 Q to K4 ch (a)
4 B to K2 4 P to Q B3
5 Kt to B3 5 Q to B2
6 P to Q4 6 B to B4 (b)
7 P to Q5 7 B to Q2
8 Castles 8 P to K3 (c)
9 B takes K P 9 B takes P
10 Kt to Q1 10 Kt to B3
11 Kt takes B 11 P takes Kt
12 B to Q B4 12 P to K4
13 P to B4 (d) 13 B to Q2
14 R to K sq 14 QKt to Q2
15 P takes P 15 B takes P
16 P to K K3 16 Castles Q R
17 Q to B3 17 R to K sq
18 B to K3 18 R to B sq
19 QR to Q sq 19 P to KR4
20 B to B4 20 R takes B
21 P takes B 21 R takes R ch
22 R takes R 22 Q to Q3 (e)
23 B to K5 23 K to B2
24 P to B5 24 Kt to K5
25 Q to K3 25 Q takes Q ch
26 P takes Q 26 Q Kt to K4
27 K to K2 27 P to K K3 (f)

POSITION AFTER WHITE'S 27TH MOVE.

BLACK.



WHITE.

- 28 P to B6 28 R takes P
29 B takes Kt 29 Kt takes B
30 R to K7 ch 30 K to Q3
31 R takes P 31 R to R7 ch
32 K to Kt sq 32 R takes P
33 R takes P 33 R takes P
34 P to R1 34 R to Q B7
35 Kt to K4 ch 35 K to K4
36 R to K7 ch 36 K to Q5
37 Kt to Q6 37 R to Q R7
38 Kt to B7 38 P to Q B4
39 P to Q6 39 P to B5 (g)
40 Kt to Kt5 ch 40 K to Q6
41 R to K6 41 R takes P
42 R to Q6 ch 42 K to K6
43 R takes P 43 R to R8 ch
44 K to Kt2 44 R to R7 ch
45 K to Kt sq 45 R to Q7
46 Kt to B5 46 R to Q6
47 Kt to Kt5 47 P to B6
48 R to Q B6 48 R to Q8 ch

- 49 K to Kt2 49 R to Q7 ch
50 K to Kt sq 50 P to B7
51 R to B3 ch 51 K to K5
52 Kt to Q6 ch 52 K to Q4
Resigns.

NOTES.

(From Land and Water.

- (a) Not so good as Q to Q R4, though often leading to similar positions.
(b) The correct play is 6 Kt to K B3. He could also obtain a tenable position by 6 P to K3 notwithstanding the shutting in of the Q B. The text move entails a loss of time in an opening of which a hindered development is a special feature.
(c) By no means as bad as it looks, but nevertheless we must prefer Kt to B3.
(d) Expecting probably a speedy victory. He should be content with the small advantage accruing from B to K Kt5.
(e) Kt to Kt5 could be profitably played, but he may not have time to thoroughly scrutinize the complications of that line. The text move is sound and good, and it preserves various beneficial points.
(f) Pretty and pleasing. Mate in four if White retake.
(g) Very good play all this, and Black has now a clear winning game.

THE EMPIRE OF THE DEAD.—According to M. Maspero, the soil of Egypt is thick with mummies. Dig in any part of the country and the preserved corpses of ancient Egyptians are brought to light. Indeed, at some distance from the Nile the soil is rendered unproductive, and therefore cannot support its population because of these artificially preserved dead bodies. It is after all a wise provision of nature which decrees that the body shall moulder away after death. The preservation of the dead is unnatural, and if universally done, would in time make the world uninhabitable except by dried corpses. The cremationists have a new argument in the lesson taught by the burial of the Egyptian dead, but after all would it not be better to place the bodies at once in the earth, so that the component parts would assimilate naturally with the soil to which it belongs. Cemeteries and graveyards violate the intention of nature as much as did the burial customs of the Egyptians.



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