Science Notes.

BIRDS AND BERRIES.

The middle of December seems a little late to bring forward a subject so much associated in our minds with autumn as is the above. The mildness of the season, however, has left so many berries and other fruits as well as leaves with autumnal tints upon the trees, that if one studies Nature rather than the calendar, the appearance is that of autumn.

There is an old superstition, that a profusion of hawthorn berries is a sign of an unusually severe winter, the supply of berries being a provision for the birds. Whether it has ever been observed that an abundance of berries is actually followed, as a rule, by a severe winter, is very doubtful. Even if it has been so observed it is more probable that the sequence is an accident, rather than a fact of any scientific significance. Persons who deal in signs are, of course, usually profoundly contemptuous of science, and if their belief were supported by fact in one or two cases, their faith in signs would be stronger than ever. They do not require explanation, so they say,—facts are enough. If, however, there is no reason why B should follow A, and B *has* followed A more often than probability would warrant, the chances are against B following A on future occasions. So much for signs that do not admit of explanation.

If the student of Nature had no explanation whatever to give of the abundance of berries in one season and their scarcity in another, he could not afford, perhaps, to criticise the believer in signs. But the naturalist has his explanation to offer; he shows that the number of berries is an indication of weather that is past, rather than of weather which is to come. If the conditions are favourable to the production of well-developed and heallhy hawthorn blossom, such blossom will be produced. But the blossom as a rule fails to form seeds, unless it is visited by flies, which, while taking honey from the flower, unconsciously distribute the pollen which will render perfect the immature seed. Therefore, to enable the flies to do their work, fine weather is required during the time that the pollen is ripe for distribution. Even after the formation of seeds, a severe frost or high winds may remove many of the fruits. This is recognised chiefly, perhaps, in the case of trees providing fruit for ourselves. The apple, pear, plum, and other trees are anxiously watched about the time of the "setting of the fruit," and congratulations or lamentations (as the case may be) are heard with respect to the weather.

To the believer in signs, the fact that most fruits are useful as food either to himself or to the birds is a sufficient apology for their existence. He may seriously go on to still further vindicate the right of hawthorn berries and rose-haws to exist (although he does not eat them), by showing how the birds, nourished by them through the winter, may do him service in his garden the following summer. To such persons, a naturalist once addressed himself as follows: We sometimes see a man, on entering a room, consumed with anxiety as to what others are thinking of him, of his appearance, of what he says and how he says it. If he only knew, he really need not trouble. Most likely everyone in the room is similarly occupied in thinking about himself. This, says the naturalist, is what we must remember in studying plants and lower animals. They do not trouble about us or produce fruit for our delectation, but for their own. So the hawthorn and the cherry and the raspberry wrap their seeds up in a luscious covering in order to persuade the birds to eat them, and the plants do this in order that the birds may disperse their seeds far and wide, where their chances of developing into healthy plants are greater than if they fell on partially exhausted soil beneath the parent tree, to grow up, if they grow at all, deprived of a certain amount of light and air. "So," might the plants say, if they were given to conversation, "we have made these seemingly useless birds do something towards the increase of the noble race of plants."

A Book of the Week.

THE STORY OF A THRONE.*

In the early part of this year I reviewed, in these pages, M. Waliszewski's "Romance of an Empress," which gave the history of the early life of Catherine II. of Russia of both famous and infamous memory. The end of that interesting book left Catherine firmly established upon her throne; the volumes now under our consideration contain the story of the later part of her reign, when having swept all inconvenient intruders away from her path, and having surrounded herself with favourites, she smiled complacently upon her throne and endeavoured to gather around her the greatest politicians, artists and philosophers of the times in which she lived. Everything in the Russia of those days depended upon her will, and she was capricious and exacting; but behind all her autocratic licentiousness she was nevertheless a great woman, with an almost masculine power of prompt decision, and if posterity has compared her to Messalina, her own age endowed her with the title of the Semiramis of the North, and the philosophers of Europe, Voltaire, Grimm and others, corresponded with her as with an equal in mental capacity.

The history of Catherine's life is also the history of her favourites. M. Waliszewski takes up in order the story of one after another of her chosen and discarded lovers. They are a motley group, all sorts and conditions of men, but chief among them all we must regard Patiomkin, of whom it has been said "that he was the real Autocrat of all the Russias for seven whole years," and yet our author tells us that "it is difficult to decide whether he was a genius or a madman." There was certainly genius in the manner in which he contrived to keep his hold over Catherine long after he could plead his claims as a lover. After he had served his apprenticeship as favourite, he remained an omnipotent Minister, and never relaxed his influence over his Empress even when a whole long gallery of men had succeeded him in her affections.

Patiomkin was poor, but noble; he began life by entering simultaneously the University of Moscow and the army. He was sent away from the University for neglect of his studies, and set out for St. Petersburg, having borrowed 500 roubles from a poor relation.

* "The Story of a Throne (Catherine II. of Russia)." From the French of K. Waliszewski. Two vols. (London: William Heinemann.)

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