— Science Notes. —

VEGETABLE PERFUMES.

It is said that the characteristic fragrance of the violet is also possessed by dried iris root. Two German chemists have just written a paper describing the method by which they extracted from the root of the iris a fragrant oil, which, when largely diluted, gives out the pleasant perfume of the violet; when pure and concentrated the scent of the oil is sharp, and quite unlike that of violets. The experimenters consider it probable that *irone* (as they call the oil), or some compound of it, is present in the blossoms of the violet; but they have been able to obtain only such very small quantities of the odoriferous material of the latter, that it is impossible to say with certainty. As the iris is so easily cultivated, it may prove a valuable source for the manufacture of the scent of the "wood-violet."

The iris is not the only example of a fragrant root. Among others found in our own country, is the rose-root (*Sedum Rhodiola*), a species of stonecrop, with thick, fleshy green leaves, and a yellow flower. This plant is found only on the high mountains of Wales and Scotland; it has a woody root, about a foot long, which, when broken, gives out a delicious odour as of a bunch of freshly-gathered roses, and (to quote a writer on Botany) "not like the sickly attar made from them."

It is not apparent what useful end is served, in the economy of the plant, by the development of perfume in the root. It may be a means of preserving the root from the attacks of such insects, or other animals, as find the scent objectionable. It has been proved, one may say conclusively, that insects are susceptible to odours, and that the perfume of flowers, whether pleasant or the reverse to ourselves, is for the purpose of attracting certain insects. The majority of flowers are dependent on the visits of insects for their fertilisation; the latter, while gathering honey from the flowers, convey the pollen dust from one to another, and so assist in the production of seeds. It is believed by some observers that bees have an æsthetic sense, which enables them to enjoy the contemplation of beautiful colours, and to appreciate sweet odours; and it has been proved by Sir John Lubbock's experiments that they can recognize colours and scents, and are guided by these in finding flowers which provide them with honey. It is therefore believed that all the attractions which flowers possess, of colour, scent, and honey, are developed for the attraction of insects. In support of this, it may be noted that flowers which are most effectually fertilised by the visits of moths, which flit about in the twilight, or after dark, are very strongly scented, and provided with white or yellow corollas, which remain visible longest in the gathering dusk. It is also well known that some of these white or pale-coloured flowers, such as the "tobacco-plant" and honeysuckle, give out a much stronger and more pervading scent at night. The "sleeping" or closing-up of certain flowers is also explained by their relation to insects. They remain closed, except when the insects capable of fertilising them are on the wing, so that they may guard their honey from being stolen by insects not useful to them, or from being washed away by rain.

The pollen of some flowers is drifted about by the wind, and, in such cases, we find the flowers small and inconspicuous, and the pollen dry and abundant; whereas in insect-fertilised flowers it is viscid, and present in comparatively small quantities. The graceful and tender-green catkins, adorning so many leafless trees at the present season, are collections of small green flowers; a gentle shake given to a branch laden with catkins, brings down a cloud of yellow dust or pollen. In wind-fertilized flowers the pollen is exposed rather than protected, and the flowers, in many cases, are developed in the early spring, when the absence of leaves and the high winds both tend to assist in the distribution of the pollen.

Notes on Art.

PROPOSAL FOR A NEW SCHOOL OF DESIGN FOR WOMEN.

For this week we will leave the many galleries of pictorial Art, and turn to the consideration of designs applied to industry, as this subject was very interestingly treated a few days since by Mrs. Dunlop Hopkins of New York. At the request of H.R.H. the Princess Christian, Mrs. Hopkins delivered a lecture on the above subject at the Imperial Institute, in the course of which she described her experiences in founding a School of Design for Women in America. The School was only opened two years since in New York, at the moderate cost of two thousand pounds, and is already self-supporting. It appears that Mrs. Hopkins, with the truly practical trading instincts of the American, had enlisted manufacturers on her side, and had secured their best operatives to give instruction to her students as to the technical requirements of each fabric or material in which the designs were to be executed, a point the importance of which can hardly be over-rated, because the failure to produce a beautiful work is often not so much due to the poverty of the design as to its unsuitability.

The scheme of training is as follows:—First, the student is, as a matter of course, taught the principles of sound draughtsmanship; an architectural course then follows, and the students then go through some months' study of historic decoration, taking, for instance, Egyptian ornament for some time, and carefully familiarizing themselves with the peculiar colours that the nation affected, as well as the distinctive style of ornament. The work of Arabian, Moresque, Spanish, and other European peoples would then be passed in review; but, curiously enough, Mrs. Hopkins said nothing about the very fertile source of instruction afforded by the Japanese. Now it is unnecessary to point out that the study of the "Grammar of Ornament" has not been neglected in this country, as is shown by such monumental works as that of Owen Jones, with its beautiful chromo-lithograph illustrations, by Cutler's treatment of Japanese ornament, and by the aid in traditional Art, and the "evolution" of ornament which is afforded by the wonderful collection of General Pitt Rivers. But the charge against the system adopted in English National Training Schools for Art, is that they produce students whose ambition seems to be the painting of pictures

previous page next page