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THE PARIS EXHIBITION.—A SKETCH IN THE PARK.

Our engraving, which represents a portion of the park at the Paris Exhibition grounds, needs little mention beyond that it is one of those delightful retreats so refreshing to the weary visitor, who, tired out with tramping about the buildings and grounds, is only too pleased to refresh his eyes with some of that exquisite miniature water scenery which is scattered about the grounds. We take our illustration from the London *Graphic*.

Improvements in Silk Worm Breeding.

Galignani states that a very curious discovery has just been made, which, if found as practicable in application as it seems to promise, may create a very considerable change in the production of silk. It is nothing more nor less than the possibility of obtaining two yields in the year of the raw material instead of one, as at present. The moth lays its eggs in May or June, and these do not hatch before the spring of the following year. But sometimes they are observed to hatch spontaneously ten or twelve days after they are laid. It was such a circumstance as this coming to the attention of M. Ducloux, Professor of the Faculty of Sciences at Lyons, that led him to undertake a series of experiments on the subject, by means of which he has found that this

premature hatching can be produced at will. The means for effecting the object are very simple—rubbing the eggs with a hair brush, subjecting them to the action of electricity, or more surely still by dipping them for half a minute in concentrated sulphuric acid. M. Bollé, who has also turned his attention to the same subject, states that the same effect is produced by hydrochloric, nitric, or even acetic and tartaric acid. Finally, a submersion of a few seconds in water heated to 50° Cent. (122° Fah.) is equally efficacious. However, M. Ducloux states that the operation must be performed while the eggs are quite young, the second or third day at the outside. When this new hatching is accomplished the mulberry tree is in its full vigor, and the weather so favorable that the rearing of the worm is liable to much less risk than during the early days of spring, when the sudden atmospheric changes are very detrimental, and frequently fatal to the growing caterpillars.

The Natural History of the Eel.

According to the reports of shad fishermen, the chief enemy of the shad is the eel, which not only follows that fish up the streams and devours the spawn, but often attacks the shad after they are caught in the nets. Entering the shad at the gill openings the eels suck out the spawn

and entrails, and leave the fish perfectly clean. The finest and fattest shad are the ones selected. It is a curious circumstance that of a fish so well known as the eel so many of its life habits should be in dispute. An animated discussion has been going on in Germany quite recently with regard to the natural history of this fish, and in a late number of a scientific journal the following points are set down as pretty well substantiated. Though a fresh water fish which passes the greater part of its life in rivers, the eel spawns in the sea. That it is viviparous is extremely improbable. The eel found in the upper waters of rivers is almost always female. At the age of four years it goes down to the sea to spawn and never returns to fresh water. The spawning process is somehow dangerous to the eel, thousands being found dead near the mouths of rivers, with their ovaries empty. The descent of the fish to the sea does not appear to take place at any definite period, but is probably dependent on the season for spawning. The male is always much smaller than the female, and never exceeds half a yard in length. The males never ascend to the head waters of rivers, but keep continually in the sea or in the lower reaches of the river. Nothing is definitely known about the spawning season, though it is probable that the eggs are deposited in the sea not far from the mouths of rivers.



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