

XXI.—SICKNESS OF THE GOLDFISH IN THE ROYAL PARK, BERLIN.*

BERLIN, *July 18, 1879.*—A destructive epidemic has broken out among the inhabitants of the large goldfish-pond in the “Thiergarten,” which rendered it necessary to remove all the fish from the pond last Friday forenoon. About two weeks ago the park-guards noticed an unusually large mortality among the goldfish. On closer examination it was found that the death of these little fish took place accompanied by very peculiar and regularly recurring phenomena. A gathering formed on the head where it is joined to the body, which soon commenced to fester; the head became soft; the body began to swell considerably; the scales, which in their natural state lie close and smooth on the body, seemed raised up by a festering substance; the lower gills, which are generally white, had a dark-red color, and a blood-like secretion oozed out of the pores. The poor fish evidently suffered from difficulty in breathing, and kept near the surface of the water. This abnormal condition became more intensified, the fish finally lost their scales and died after three days, often after a few hours.

The number of dead fish increased from day to day till at last the number of deaths amounted to sixty per day. An immediate examination of this entirely unheard-of phenomenon was therefore made. Some of the dead fish were taken to the Physiological Institute, where a microscopical examination revealed the fact that these fish contained a large number of living infusoria, which had almost entirely eaten up the liver. In other fish, especially those which were particularly bloated, the whole inside was a spongy substance, and various phenomena strongly resembled those generally observed in dropsy of human beings. The species of infusoria found inside these fish could not be determined, for it is the first time that infusoria of this kind have been observed at the Physiological Institute. After the character of the sickness had been ascertained, its cause had to be found. It was ascertained that most cases of sickness occurred in the northern portion of the pond, where fresh water is introduced. This portion of the pond was carefully examined and found to be full of a slimy substance which, when dried, broke into innumerable fine dust-atoms.

The supply of water was of course stopped at once, in consequence of which measure the water in the pond has sunk one-half meter. Sci-

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entific men will now subject the water to a searching examination. This water comes from six springs located near the hippodrome at Charlottenburg, which are under the inspection of Counsellor Hoboecht. From the Hippodrome, the water is conducted through pipes to the "König's Platz," where it supplies the fountains, and from here it flows into the goldfish-pond. If impurities have been introduced into the water (and this is beyond a doubt), it seems natural to suppose that these impurities have originated in the springs themselves, as was the case in the Tegel water-works. A scientific investigation will doubtless explain why such impurities have got into the water just now, after the Hippodrome water-works have been in operation for so long a time. Possibly the increased quantity of water taken from the springs has stirred up waters which had hitherto been left entirely undisturbed. The shutting off of the water has of course also stopped the fountains in the "König's Platz" for the time being. The taking out of the fish from the pond this morning attracted a large crowd. The work itself was troublesome and consumed considerable time. Three fishermen caught the fish in a large net. The fish were examined at once and the healthy separated from the sick. This examination showed the sad result that almost 20 per cent. of all the goldfish in the pond had become infected. Until the pond is thoroughly cleaned and the whole matter has been satisfactorily investigated, the fish will be kept in the ponds back of the nurseries, where hitherto some of them have wintered. If it is any way possible, attempts will be made to cure the sick fish.