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# THE ZOOLOGIST:

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## A NEW BRITISH WORM.

BY THE REV. HILDERIC FRIEND.

My attention was drawn during the last week in July to the fact that in the neighbourhood of Birmingham the China Aster was perishing from some form of blight. On pulling a sickly plant from a flower-bed at King's Hill, Wednesbury, Staffordshire, and examining the roots with a pocket lens, I detected a minute worm. This evidently was the cause of the mischief. On submitting specimens of the annelid to microscopic examination I found it to be an Enchytraeid; and so far as I am aware it is new to science, unless it has been examined by some of the florists and described in journals which I am unable to examine. I should recommend all periodicals which deal with the flower-garden to copy this description.

## THE ASTER WORM.

ENCHYTRAEUS PARVULUS, *Friend*. This destructive pest is 3-4 mm. or about one-eighth of an inch in length, and when seen at work is of a silvery white colour. It has no coloured blood, and may be called a white worm—no uncommon thing in this group of annelids. It lodges under the epidermis of the root and feeds on the juices and tender vegetable substances, thus absorbing the plant nutriment and preventing the roots from performing their natural functions. It is gregarious, for quite a colony will sometimes be found in one plant. The average number of segments is thirty, and on segment XII. a girdle is developed, somewhat papillose, with a pair of pores associated with pear-shaped bodies. The ventral setæ are absent from this segment, their places being occupied by the pores. In the hinder extremity there are four sets of setæ in each segment, each set containing three setæ. The anterior differs from the posterior, inasmuch as the lateral setæ are in couples and not triplets. Thus in segments II.—XI. we have two setæ in each lateral bundle, and three in each ventral bundle. On segment XII. we find two lateral pairs only, then for a few segments more there are two in the lateral and three in the ventral bundles, while the last ten or dozen segments have four triplets each.

The nerve-cord shows a tendency to enlargement between segments III.–IV. and the brain is pear-shaped with a rounded or convex hinder margin. There is a large head-pore between the prostomium and the first segment, and through this the cœlomic fluid and other floating materials from the body-cavity and head are poured out when a little pressure causes inconvenience to the worm.

The question naturally arises, Can this be the same as Michaelsen's Silver Worm (*E. argenteus*), found on the shores of the Elbe, or not? Unfortunately I do not possess the author's pamphlet, and the digest in Mr. Beddard's monograph is too brief for a decision. The descriptions correspond as far as they go, but I have not been able to verify the account of the nephridia, nor are we told in what way the setæ are disposed, or what the habits of the Elbe species are. In any case *the species is new to Britain*, and its predatory character raises the serious question—What is the best thing for the flower-grower to do if he finds them attacking his asters?

THE BEST REMEDY is the drastic one of pulling up every plant which shows signs of sickness and consigning it instantly to the flames. It might be possible to save some plants by carefully cutting out the roots which appear to be affected; but the operation would have to be performed the instant there were signs of failure, it would have to be conducted with the greatest care and delicacy, and there would still be two risks. Either the plant might succumb to the treatment, or the disease might reappear owing to the eggs of the worm having been left in the roots. The eggs are so minute that even the microscope would be of little service in their detection after they had once been extruded.

There is no doubt but that many of our minute annelids are parasitic. Heretofore, however, we have heard little of their ravages. The reason is probably to be found in the fact that so little was known formerly of annelid anatomy that when a worm was discovered its description lacked scientific precision, and so the different parasitic worms remained uncatalogued and unknown.