RAMBLES WITH NATURE STUDENTS.

By ELIZA BRIGHTWEN, Author of "Wild Nature Won by Kindness."

HONEY GUIDES.

IT is interesting to observe the markings upon the petals of flowers which serve as honey guides for the bees. For instance, in the rhododendron the stamens all curl upwards and the richly coloured spots are placed on



the upper petals to direct the bee where to alight. As it passes down into the flower to obtain the honey it is seeking, it cannot help brushing pollen off the anthers, and thus, its hairy bolk becoming covered with the powder, it carries it to the next flower it enters and ensures what is called cross fertilisation, that is the pollen of one blossom being placed on the stigma of another.

In the gladiolus the stamens are differently arranged, and the bee is required to enter below instead of above the stamens; there are therefore three honey guides on the lower petals, and the bee, all unconsciously, bears a



load of pollen on its back and performs its useful office of fertiliser to each flower in succession.

In the iris the lower petal is usually covered with a rich pattern of coloured stripes, which all lead up to the narrow passage where the bee must enter and push its way, necessarily

brushing pollen off the anther in its progress to reach the honey at the base of the petal; as it enters the next flower it cannot fail to leave the pollen on the stigma at the entrance, and this wonderful contrivance can be traced in the



LARDER FLY. (Magnified.)

delicate stripes of the wood-sorrel and very many other flowers where distinct way-marks are afforded to guide the bees in their most useful work of fertilisation.

It adds an interest to our walks to know that the infinitely varied beauty of flower-tints and markings have this useful purpose in view.

The close connection that exists between insects and flowers has been much studied of late, and it has been ascertained that many plants cannot produce seed unless their flowers are visited by insects.

When orchard-houses were first built and stocked with peach, nectarine and other trees scarcely any fruit was produced, because no provision had been made for allowing bees to enter and do their useful work.

This was the case in my own peach-house the blossoms were ready for fertilisation, the busy insects did their work effectually, and a good crop of fruit was the result, but the oor bees could not find their way back to the hive and they nearly all died. To obviate this sad disaster the gardener

has learned to fertilise the peach-flowers by brushing them lightly with a hare's foot, which detaches the pollen and conveys it to the anthers without injuring the blossom.

THE COMMON HOUSE-FLY

(Musca Domestica).

It is rather surprising that, as a rule, so little is known about the life history of the common house-fly.

The creatures abound in our houses, we have been familiar with them from childhood, but, where they come from, how they propa-gate, and what are the stages of their life-history, who can tell us ?

Perhaps it may be interesting to throw some light upon this domestic plague, and more especially will this be useful because a little knowledge about flies will enable us greatly to reduce their numbers.

The common house-fly lays its eggs in vegetable refuse, decaying cabbage stalks and such like; it is therefore important that such matters should be burnt instead of being thrown into the dust-bin.



The eggs hatch into small white grubs; these, when full grown become chrysalides and the flies emerge in due time. The blue-bottle fly is only attracted by a meat diet. These flies find out any dead animal or bird and quickly deposit dozens of the mean small white emerges.

very small white eggs upon it. The eggs hatch out in a few hours into small white

maggots (known to fishermen as "gentles' of a peculiar shape, being pointed at one end and flat at the other. These creatures devour any kind of flesh with wonderful rapidity, so that Linneus

BLUEBOTTLE. (Magnified.)

meat is covered by a wire sieve this insect will meat is covered by a wire sieve this insect will often drop its eggs upon the joint through the interstices of the wirework, so that to make a larder really fly-proof the windows should be protected by fine wire gauze. The smaller green-bottle fly has the same habits, and spends its life in lay-ing eggs on dead or decover embetances

decaying substances or else basking on leaves in the sunshine. When seen through a magnifying glass its body glistens like a precious stone, or like burnished golden-green metal; al-though this insect is so common it is well worth examination for its beauty really baffles description. Its many facetted eyes and the formation or its feet should also be observed by the student. The larder-fly (Sar-

cophaga carnaria) is the largest of the genus, being half an inch in length; it differs from the other flies in depositing its young alive upon decaying animal and vegetable matter, and, sad to say, it sometimes places its grubs upon living animals.

Réaumur calculated the number of young produced by one fly of this species to be about 20,000, we may therefore imagine how valuable such an insect is in speedily

CANARY GRASS.

declared that "Three bluebottles could eat an ox as fast as a lion could." The bluebottle is a very determined character. Even when



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