

S. The kind with hard wing covers over their real flying wings.

T. Any others?

S. Flies and fleas.

T. Yes, that will do, we shall call the principal kinds orders. Why should we put insects in orders?

S. I suppose for the same reason scholars are put into classes. Those most alike are put in the same class.

T. Well, there is something in your reason, but you will soon know more. Now we shall look over some of those we have collected, and see if we can put them into a few orders or classes. What might we call this kind of work?

S. Classification.

T. Well then, we shall see how we can classify them into the *nine* orders in Sir William Dawson's book. I think you would like to take his classification for two reasons. I know you would. First, because he is a great scholar; and secondly, because he is a Canadian—our own countryman.

Order I. has no wings. Have you seen any of that kind?

S. Yes, bugs.

ANOTHER. Some bugs have wings.

T. Naturalists put bugs without wings in the same order as bugs with wings, because they are so much alike in every other respect except the wings. Do you know any others?

S. Lice and fleas, I suppose.

T. Well, not exactly the fleas, but they are so much like the lice that we shall have them in the next order. Now many of the names in zoology are taken from Greek; and we shall try to construct a name. I shall give you the material. The Greek for wings is *ptera*, and *a* means without.

CHORUS. Aptera.

T. Correct. Write down, "Order I. *Aptera*." The next are very much like the lice, but when hatched from their very minute eggs, they are extremely small maggots, and then, as the caterpillars do, they change into insects of the flea kind. They also appear to have just the beginnings of wings, but they are generally invisible. The Greek for invisible is *Aphanes*. Make a name for this order.

CHORUS. Aphanesptera.

T. It is hard to sound the *s* before *p* in that word, is it not?

S. Yes, Aphanesptera.

T. A better word; but they spell it with an *i*. Write down, "Order II. *Aphauiptera*."

Here is the male "Horse-Breeze Fly." How many wings has it?

S. Two.

T. The Greek for twice is *dis*. CHORUS. The order is Diptera—no, you can't pronounce the *s* easily there—Diptera.

T. Correct. "Order III. *Diptera*." Their life stages are the egg, the maggot, the pupa, then the perfect fly. What Diptera have you noticed?

CHORUS. Mosquitoes, house-flies, blue-bottle flies, horse-flies, daddy-longlegs.

T. The fourth order contains the butterflies and moths. How many wings has this "swallowtail."

S. Four.

T. And so has the bee and the wasp. Would you put them in the same order?



S. No; it wouldn't do then to make a name for these orders from the Greek for four. But the butterflies and moths have scale dust on their wings, and the bees and wasps have none.

T. The Greek for "with a scale" is *lepidos*. What is the name?

CHORUS. *Lepidoptera*.

T. Correct. Write down "Order IV. *Lepidoptera*." The bees and wasps and this *ichneumon* fly, which is one of the deadly enemies of the great caterpillar of the Emperor or Cecropia Moth, have also four wings, but the transparent membrane is quite naked. Greek for "of a membrane" is *hymenos*. What is the name?



CHORUS. *Hymenoptera*. Order V.