

of spring crawl out of their earthy chambers to run and sport on earth, seldom using their new found wings to fly away from their beloved mother.

The grubs are curious creatures—hideous hunchbacks, fig. 15, but possessed of brain and stomach. They live in the same localities as their parents, the anxious mother having wisely deposited her eggs where food will be most easily attainable by the larvæ. Let us examine a grub. LeConte says that we can easily procure one in spring by placing a fine straw down one of their holes, for the grub will push it out, and rising above ground in his efforts, may be captured. Here is a hole, and down goes a straw. Master Cicindela does not like vegetables, and so seeks to eject it with his broad head; when he shows himself we quickly seize him. A perfect Daniel Quilp we find him, with head enormous, flat, metallic color, armed with long curved jaws. The legs are six in number, and on the back, half way between the legs and tail, "are two curious tubercles, each terminating in a pair of recurved hooks." The head and first division of the body are horny, the rest of the creature is soft. "The larva has all the desire for slaughter evinced by its parents, but its delicate skin, long body and short legs, not only prevent it from chasing prey, but from attempting a struggle with an insect of any size; nevertheless this imperfectly armed creature manages to obtain its food without exposing itself to much risk. With its short, thick, spiny legs it loosens the earth; and then using its flat head as a shovel, and turning itself into a Z, hoists up the clay and upsets it around the mouth of its intended hole. With head and legs, perseverance and time, it sinks a shaft as large in diameter as a lead pencil and about a foot in depth. (Dr. Duncan says that in England *C. campestris* runs a horizontal gallery as well.) The loose earth around the opening gives way on the approach of any insect and precipitates it into the jaws of the Cicindela, which then descends into its cavern and there at its leisure devours its food." The insect crawls in its tunnel with ease, and if it wishes to remain set fast it sticks the back of its body against the sides and rests safely with the aid of its hooks. In this position it can poke its head out of the ground, thus closing the entrance of its tunnel and awaiting until some ant or other insect passes over. The top of the larva's head forms the floor of the cavity, and when an insect touches it the larva descends at once and with great precipitation, and thus the victim falls into the hole. When fully grown the larva closes up the mouth of its abode, and in quiet and solitude undergoes its metamorphosis, lying dormant during the winter months.