

with a peculiar mechanism for the special purpose of accomplishing a singular mode of leaping, independently of any action of the legs. The legs of this insect are so short, that when it is laid on its back, it cannot turn itself, being unable to reach with its feet the plane on which it is lying, and procure a fulcrum for the action of its muscles. It is apparently with the design of remedying this inconvenience, that nature has bestowed on this tribe of insects the faculty of springing into the air, and making a somerset, so as to light on the feet; an effect which is accomplished by an exceedingly curious mechanism. The prothorax is prolonged beyond the length it usually has in other coleoptera, and it is articulated with the mesothorax on the dorsal side by two lateral tubercles, which form a hinge joint, limiting its motions to a vertical plane. The sternum, or pectoral portion of the prothorax, is also extended backwards, and terminates in an elastic spine, which is received into a cavity in the mesothorax, and which, while the insect is lying on its back, with the prothorax bent upon the mesothorax, recoils with the force of a spring, and communicates to the body an impulse which carries it upwards to a considerable height. If the elater should fail in its first attempts to recover its feet, it repeats its leaps till it succeeds. We find no example of a similar structure in any other part of the animal kingdom.

The express adaptation of structure to the mode of life designed for each species of insect is nowhere more strongly marked than in those which are intended to burrow in the earth: and of these the *Gryllo-talpa*, or mole cricket, presents a remarkable example. A minute account of the anatomy of this insect has been given by Dr. Kidd,\* from which it appears that being destined, like the mole, to live beneath the surface of the earth, and to excavate for itself a passage through the soil, it is furnished with limbs peculiarly calculated for burrowing, with a skin which, being covered with a fine down, effectually prevents the adhesion of

\* Phil. Trans. for 1825, p. 203.