

one above the other. The largest species we have is called the *American Sexton* (*N. Americanus*, Oliv.) ; it is nearly an inch and a half long, deep black, ornamented above with large orange-red spots on the head, thorax, and wing-covers, and beneath with light yellow hairs on the breast.

These insects are wonderfully powerful for their size, their flight is vigorous, and they are able to run with rapidity. We have at least ten species of these grave-digging beetles in Canada, differing from each other in size and ornamentation, but all possessing the same habits and instincts. They are not at all uncommon during the summer months ; no sooner, indeed, is any small dead animal or piece of flesh left in a decomposing state on the surface of the ground, than they assemble in troops to bury it. After a careful examination of the object, as if to take its dimensions, and ascertain how many labourers would be required for the job, several of them commence operations by creeping beneath the carcass and digging away the earth with their fore-legs ; they continue their labours till they succeed in sinking it several inches, sometimes nearly a foot, beneath the surface ; and at the end of twenty-four hours the object is generally out of sight, unless it be particularly large, or the ground difficult to work in. In this labour the males assist, and as soon as it is accomplished, the females deposit their eggs in the carcass.

Many curious and interesting accounts have been published respecting the habits and instincts of these creatures—two interesting narratives of the kind are given in the *Canada Farmer* for July 15th, 1868, page 214. A German Entomologist relates that he confined four beetles of this genus in a small space, and supplied them with the following quantity of materials : four frogs, three small birds, two fishes, one mole, two grasshoppers, the entrails of a fish, and two pieces of ox's liver ; they succeeded in interring the whole in fifty days. Of course this quantity was much more than sufficient for the nourishment of their future progeny, for whose benefit the burying takes place, and it was probably only because these carcasses were placed within their reach that they continued their burying propensities, (Westwood). As a further instance of their powers, we may mention the following case, related in the *American Entomologist* :—

"On one particular occasion, having deposited a full-grown rat upon newly-moved earth in a particular spot, as a trap for these Burying-Beetles, we found that in twelve hour's time the carcass had been completely buried, all but the tip of the tail, by a single individual of our largest and handsomest species, (*N. Americanus*, Oliv.) a beetle which is only one inch and a half long. It would puzzle an Irish labourer to bury a full-grown whale in the same length of time ; yet proportionately this would be a task of precisely the same magnitude."

The Carrion Beetles (*Silpha*, etc.,) differ from the foregoing in their more flattened shape, and dulness of colour, as well as in their habits and minor peculiarities of structure. Our largest and commonest species is the *Surinam Silpha* (*S. Surinamensis*, Fab.) Its colour is uniformly black, with a transverse irregular, reddish coloured band or series of spots, near the end of the wing-covers. It is found abundantly in carrion during the summer, and may certainly be considered from its fetid odour and repulsive appearance an exceedingly disgusting, even though highly useful creature. It does not bury its food, like the Sexton Beetle, but may be found swarming in and over exposed carcasses during the summer months, evidently reveling in filth. The handsomest species of this genus is the Shield-bearing *Silpha* (*S. peltata*, Catesby,) which is remarkable for the broad, thin expansion of its thorax in the form of an ancient semi-circular shield, of a creamy-white colour, ornamented in the middle with a device somewhat in the form of a cross. We have occasionally taken it in numbers about the body of a dead fish. The larvæ of this genus, unlike those of the preceding one, are obliged to seek their own food, which is of the same character as that of their parents, and consequently have strong legs, and a crustaceous flattened body.

5. SCAVENGER BEETLES (*Staphylinidae*).

The preceding group of insects follow the useful occupation of sextons for the smaller animals, or employ themselves in other ways for the removal of carrion. The next tribes of beetles that come within the scope of our present observation, discharge a somewhat similar office in the domain of nature, and busy themselves in the removal of nuisances from the surface of the earth.

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