A much smaller but very peculiar genus of beetles, is called the Bombardier (Brachinus,) from its extraordinary power of discharging from its tail end a very pungent fluid, accompanied by a report (resembling the sound phut) and some smokelike vapour; this fluid, which resembles nitric acid in its effects, and makes a stain

Fig. 75.

on the fingers that will last for several days, is no doubt intended for its defence against more powerful beetles. one of these beetles (B fumans, Linn.); its head, thorax, and legs are yellowish-red, and its wing-covers dark blue. Like other ground beetles, it may be found under sticks and stones in the spring, and in similar hiding-places on the damp

68

different species of this genus in Canada, but all are very much alike. It would be almost an endless task to go through the list of species of this family, but we trust that the examples now given will be sufficient to enable our readers to recognize these friendly beetles, and save them from being doomed to a pitiless destruction, that knows no difference between friend and foe.

margin of rivers during the hot summer months. There are quite a number of

3. WATER BEETLES (Dytiscide, Gyrinide &c.)

After the carnivorous Ground Beetles, we come, in the ordinary classification of insects to a large group that live almost entirely in or upon the water. Some of them live on the surface of lakes, ponds and pools; others prefer clear running streams; others, again, the muddy bottoms of half-stagnant pools.

This group is divided into two principal families, the "diving-beetles" (Dytiscide), and the "whirligigs" (Gyrinidæ). They are all more or less insectivorous, both in their larval and perfect state, and hence beneficial. As their food, however, consists mainly of insects that inhabit the water, and which are either similar in their food and habits to their destroyers, or live upon water plants of no particular value, it can hardly be said that they are beneficial to the farmer or fruit-grower ; still, as they are not noxious and are certainly useful in their own sphere, we shall go on to describe them, and implore that their lives may be spared from the destruction so universally dealt out to the poor insects.

The Diving-beetles (Dytiscidae) are mostly large-sized insects of an oval flattened shape, generally of a dark brown, olive, or blackish colour, and often with a margin and other mark ings of yellowish. Their legs are specially adapted for swimming, being large and oar-like, and covered with long hairs; the hinder pair are very much flattened, also, so as to give a propelling stroke. When they rise to the surface to take in a fresh supply of air-a silverlike bubble of which may generally be seen attached to their hinder extremities-they appear to come up merely from being specifically lighter than the water; but when they dive or swim through the liquid, which they do with great swiftness, they move by means of regular and successive strokes of their oar-like legs. When at rest upon the surface they extend these legs at right angles with the body, generally with the head under water and the tip of the abdomen above, enabling them to draw in air to the spiracles beneath the wing-covers. They inhabit stagnant pools in preference to running water, and are very voracious in their habits, attacking and devouring other denizens of the water, even occasionally preying upon very young fish. We have kept a specimen for many weeks in a glass jar of water, and watched its graceful movements and curious habits with much interest; it fed greedily upon houseflies, aphides, etc., with which we supplied it.

Their larvæ are called "water tigers" from their ferocity ; they are long and cylindrical, with large flattened heads, armed with scissors-like jaws, by means of which they seize other insects, and, it is said, "snip off the tails of the tadpoles! "Their body terminates in a pair of long tubes through which they inhale the needful supply of air. When about to transform they creep into the earth near by, and make a round cell, inside of which they assume the pupa state, the perfect beetle appearing in two or three weeks, if in summer, but not till the following spring if in the autumn. We have sometimes seen little pools of water in the spring perfectly swarming with these and other larvæ.

The wh beetles that in every di ingly quick wing-cases, them they bubble of ai tion of their to change th them to mig small puddle cially of the singular mot some writers no closer bor of the Gyrini ther suggest they are infl often observe weather they growing at th milky fluid, able structur one on the u able to the in is enabled to are all of a b tarsi, and lor one-fifth to h

Besides aquatic beet termed "Wa The mer

of streams an refuse and de noticed, and t and by. A c the species a without close dismiss them Beetles.

These c tinguished by the black nat from the sur wise become sorts, though the wing, and Silphidæ are Sexton or Bu represented in

The Sex edly handsom orange-red sp that of a Hu terminated by





Fig. 75 represents