pole is to be attached. Provided with such an apparatus, many things may be fished out easier than by using the hands. The latter method is not always pleasant, on account of the presence of a large, greyish, rather flat-bodied water insect, a species of Nepa, and also the long and strong larva of the large water beetle. The *modus operandi* of the latter, when caught in the hands, is not at all agreeable, as it strikes its large side jaws or mandibles into one's finger. The fore-foot of the large water-beetle or Dytiscus, is usually regarded as one of the most beautiful objects for microscopic examination. Besides the above, a good collection of minnows, sticklebacks and other small fry may be made. In case it is desired to keep some of these latter in an aquarium, care should be taken to keep the sticklebacks in a separate vessel, as they will not hesitate to nip off the tails and fins of their fellow prisoners: the same precaution applies to all water beetles and insects. The ponds are also full of the common cray fish (*Astacus Bartoni.*) These can be easily kept in an ordinary globe aquarium; it being only necessary to give them a small piece of fresh beef once every week or ten days; the meat must be removed the second day after it is put in, as it is apt to contaminate the water very rapidly. In case any of the cray-fish should die, a microscopic examination of the compound eyes will be found well worth any trouble necessary. The method adopted is as follows:—After removing the dead creature from the rest, place in a separate vessel of water, and allow it to remain there for four or five days, by which time the muscles will be found to separate more easily from the shell. Then carefully remove the eye from the head, and wash out its contents, either by means of a syringe, or by holding it under the water tap and allowing the water to flow down. As soon as this is done and the interior is seen to be clean and empty, dry by placing on a piece of blotting paper. The eye-case when examined will be found to be made up of a great number of square divisions with diagonal lines in each. About the second or third week in the month of May, long strings of white jelly-like beads may be seen in the ponds; these are the eggs or ova of toads, pairs of which are to be seen along the edges of the pond: the female toad being nearly twice the size of the male. If some of these ova be brought home in a bottle full of water, the next day or so the embryo toads will make their appearance and begin to swim about. At this stage the young creature is provided with external gills, a tuft on each side of the head, which may be seen when examined under the microscope. In about a week or ten days, these gills begin to be absorbed by the young creature. The ova of frogs are also found in the ponds; they are similarly shaped, but in large masses. Young frogs, or tadpoles, in all stages of development, may be collected during the summer. Several species of shells are found living in the same ponds. One of the largest and finest of the univalves, is flat-whorled, with a large aperture or mouth, the edge or border of which is coated with white enamel, and there are distinct ridges on the whorls; this species is called Planorbis macrostomus, a name expressive of the style of shell. There is also the small bivalve, Sphoerium rhomboideum, known by its yellow border, and the large species, Anodonta Ferussaciana. In the St. Lawrence, in front of the city, quite a good collection of bivalve and univalve shells may be made; commonest among the former, are specimens of Unio complanatus, U. cardium, and U. radiatus. An occasional pearl may be found in the mantle of these creatures. Among the univalves are Planorbis trivolvis, Limnæa stagnalis, and Melania niagarensis. On the mountain about twenty-five species of land shells have been collected. Prominent among these is the large white-lipped helix—Helix albolabris, Helix concava, H. alternate, and H. monodonta. The best time for collecting the latter is about the middle of September, when the weather is beginning to turn cold, at which time the creatures crawl under stones and fallen leaves. The lingual ribbon or tongue of many of the land and fresh water univalve shellfish, forms an interesting object for the microscope. The forms of the small teeth which bestud the ribbon, can best be made out by using polarized light. For this purpose the ribbons of Helix concava, Planorbis macrostomus, Limnæa stagnalis, and Melania Niagarensis will be found more interesting than the others, especially the long ribbon of the Melania, a species found about the islands on the St. Lambert side of the river, which is finer than any from the rest of our land or fresh water mollusca, and will bear comparison with lingual ribbons of marine species. The method used by the writer in preparing these objects, is as follows:—First drop the animal, when alive, into boiling water, which soon kills it, and loosens the hold of the muscles on the shell. After this remove the body by means of a hooked wire or pin, and put it into a solution consisting of equal quantities of Liquor Potassae and clean water; cover up the containing vessel and allow the whole to remain *in statu quo* for one week. Do not attempt to hasten the action of the potash, in dissolving out the ribbon, by boiling, as this will very likely destroy the object altogether. At the end of the week the body of the animal will be found sufficiently soft; then pour the whole into a test tube and shake it several times so as to break up the body. After this is done add some more clean water, mix and pour out gently into another vessel, watching carefully for the small yellowish white ribbon, which, in the species named, is usually less than one quarter of an inch in length. As soon as the required object is seen, remove it with a camel-hair brush, and, replacing into the test-tube, add some clean distilled water, if obtainable, and shake up well, so as to remove any adhering portion of the body, as well as any trace of the potash. After careful washing, the ribbon is ready for examination, either with or without polarized light.

In addition to the foregoing, over two hundred species of Coleoptera, or beetles, have been collected in the vicinity of the city. Several kinds of butterflies may be seen flying about during the summer;—some of the latter are quite local, such as the large red-winged species—Danais archippus, being most abundant in the fields near Victoria Bridge, and the Camberwell Beauty (*Antiopa Vanessa*) occurring in numbers about the quarries. The larvae or caterpillars of the latter may be seen, in the month of August, swarming on the shrubs in the above locality. The branching hairs on the body of these and other species of caterpillars, are fine objects for the microscope. Several kinds of Caddis, or case-worms, may be seen crawling in the water, along the bottom—principally around the islands opposite to the city. Some of the cases of these worms are very curious, being constructed either of grains of sand agglutinated together in the shape of a small shell or like a shallow trough, or else formed of short bits of the stems of water plants and chips. There is another class of insects which should not be overlooked, namely, the Poduridae. The scales from the wing-cases of certain species of Podura have frequently been used as test objects for ascertaining the defining power of the lenses of microscopes. The scales of a fine large greyish coloured variety, found under stones and chips on the east end of the Mountain, are worth examining. There is considerable difficulty in catching these Podurae, or Spring-tails as they are also styled; for when the insects are alarmed they have a habit of striking their forked tail against the object on which they may be resting, and thus enabling them to spring to a considerable distance out of the way. Various plans have been recommended for catching them, such as scattering oatmeal about the places they frequent, and another, of holding the open end of a glass phial over the insect and allowing it to jump into the bottle. The latter method, however, is very much like that recommended to juvenile naturalists by nursery maids, of catching birds by putting salt on their tails. The following has been used with success by the writer:—Take two small glass phials like the so-called homœopathic bottles; fill one with dilute alcohol, and the other with sulphuric ether. Then, when the insect is seen, bring the uncorked bottle containing the ether till within three or four inches, and carefully drop some of the liquid on the insect, just sufficient to stupify; which done, the insect should be carefully lifted up with a small brush, and placed in the other bottle. The above method will be found to succeed, so long as no shadow is allowed to come over the creature—if a shadow crosses, the springtail suspects danger, and is aroused to action and soon disappears.

Several species of snakes are found in the neighbourhood of the Mountain, and two or three kinds of newts, or water lizards, also occur living. The common yellow-bodied species, speckled with dark spots, living in the ponds on the right of the St. Lawrence street toll-gate, is furnished with external gills or breathing organs during the early part of the summer. The other species of greyish colour is much larger,—sometimes eight or nine inches in length—is also provided with external gills, and may be found under stones in different parts of the river.

Besides the above creatures two species of fresh-water sponges also occur living. They are most common in the new basin at Windmill Point. The one grows on rocks, to the height or length of a foot or more, and branching in different directions. To this Bowerbank has given the name of Spongilla Dawsoni, in honor of Principal Dawson, who was the first to call the aforesaid gentleman's attention to the species. The other kind grows encrusting rocks, chips, &c. Sections of the branching sponge exhibit two sorts of spicules, both smooth, needle-shaped, thicker and slightly curved in the centre, one sort being considerably larger than the other, and forming the axis or mainstay of the organism, while the smaller ones are scattered through the body of the sponge. The form of spicule in the encrusting species is also pointed at both ends, thicker and slightly curved in the centre; but instead of being smooth, it is covered all over