

author's types and those described by Banks and Peckham. At Toronto there is a small collection with a large proportion of west coast species. The museum at Banff contains large numbers of the spiders living in the neighboring mountains.

The spiders of Canada fall naturally into several faunal groups. The house spiders with which we are most familiar are most of them introduced from Europe or from more southern parts of this continent. The common *Tegenaria derhami* of cellars and barns is a European species. The common round web spider of barns and bridges, *Epeira sericata* is also European, and is never found far from buildings. The still more common spider in houses of all kinds, *Theridion tepidariorum*, is found in caves and under cliffs farther south, but its original home is unknown. The same is true of the large gray *Epeira cavatica* found in barns and sheds through southern Ontario, Maine, and New Brunswick. The European *Epeira diademata*, a spider of gardens and the outside of houses, has been found at St. Johns, Newfoundland, and at Quebec.

The most distinct faunal group in Canada is the so-called Canadian fauna which occupies the part of Canada originally covered by forest consisting mostly of spruce. This comes to the coast in Maine and New Brunswick, and its southern border extends westward across Maine and Ontario north of the Great Lakes and the prairies to the Rocky Mountains. Several spiders have their southern limits along this border, as the author has shown in the report of the Entomological Society of Ontario for 1917. *Theridion zelotypum* is the most conspicuous of these, making large coarse webs between the spruce branches, with nests in which the female and her brood of young live together through the summer. *Linyphia limitanea* follows much the same range but a little farther north from Newfoundland to Manitoba, and has not been found beyond the Canadian boundary except in northern Maine. *Zilla montana* is another Canadian species that extends across the continent and south on mountain-tops to North Carolina. It lives in trees and on rocks, and settles readily on houses surrounded by forest. It lives also in Europe in the Alps. *Linyphia nearctica*, another species of this group, seems to be very sensitive to its surroundings. It is found usually on spruce trees near bogs from Labrador to the Rocky Mountains, and extends south in the upper forest of the mountains of New England and New York from an altitude of 2,500 feet up to the limit of trees. All these spiders live in trees well above the ground, but other species that live in moss close to the ground have similar distribution. One of these is *Theridion*

*sempunctatum*, a pale spider with gray and white spots, and another, *Pedanaestethus fusca*, a darker gray species resembling *P. riparius* of farther south. All the spiders of the Canadian fauna do not have this restricted range but extend much farther north and south. The species of *Pardosa* which live in open ground in bogs, along river banks and on mountain-tops, extend northward, some of them as far as animals of any kind have been found and also extend southward in bogs to the New England coast, New York and Ohio and on mountain-tops to Colorado. Some of the widely distributed Canadian species extend eastward by way of Greenland and Iceland, into Europe, or westward through Alaska into Siberia.

South of the spruce forest area, the country is occupied mainly by a fauna known as "transition" or "Alleghanian," containing many species of very wide distribution and closely related to the fauna of northern Europe. Through southern Ontario, Manitoba and Saskatchewan, the common spiders belong to this group. One of the most common and conspicuous by its cobwebs is *Agalena naevia*, which makes its large flat webs in grass fields, among low bushes, in dead trees and brush, and even in windows and doorways. These spiders lay their eggs late in the summer in flat cocoons partly covered with leaves and dirt, and adults all die before winter. The young hatch and sometimes leave the cocoon before cold weather, but for the most part wait until the next spring. The large *Epeira marmorea* and *Epeira trifolium* are conspicuous species, and also mature in the late summer and die before winter. In August and September their large round webs hang in large numbers in berry bushes and golden-rod, the brightly colored spiders hidden nearby in a nest of leaves fastened together and lined with silk. *Epeira patagiata* is another common spider of this fauna and extends far north into the Canadian area. It is colored in grays and browns like bark and wood. It makes its cobwebs after dark and leaves them at daylight, hiding in some sheltered place often several feet away. It establishes itself readily in barns and on the outside of houses, porches and fences, both in America and in Europe. The large white flower spider, *Misumena vatia*, lives among flowers all the way across Canada, eating flies and other insects that come to rest and feed on the flowers. Into this part of the fauna come many species of jumping spiders, *Attidae*, *Dendryphantes militaris* and *Dendryphantes flavipedes* live in great numbers on small trees and bushes, making no cobwebs but moving about constantly among the leaves, creeping close to resting insects and jumping upon them. They