

In studying the parts and points of a fish do not rely on pictures and drawings alone, but have a specimen or specimens before the class. A live specimen in an aquarium adds interest and illustrates many things about its swimming, breathing, feeding, etc., that no amount of explaining could make plain and intelligible to the average pupil.

A fish-map of Canada correlates the subject with geography, and the story of our fishery disputes gives it connection with history.

Send to the Commission of Conservation, Ottawa, for its report on the "Conservation of fish, birds and game" (issued 1916). It contains some valuable information and suggestions that the teacher may find helpful.

But other animals besides birds, fish and mammals have the wandering habit. The migrations and depredations of insect swarms have been recorded since the earliest days of history. And even within the confines of our Acadian district hardly a year passes without the sudden appearance of insect pests, in threatening numbers. All can recall ravages of the spruce budmoths, the tent caterpillars, and army worms, in various parts of our provinces in the last few years, and it is not so many years that the potato beetle, cabbage butterfly, and the horn-fly first reached us. And even now many other forms are threatening us, e. g. the Gipsy and the brown-tail moths.

As a migratory form the monarch butterfly has an interesting history. It is a native of tropical America, and spends the winter in the south, where it is often found in large swarms.

"Each mother butterfly follows the spring northward as it advances, as far as she finds the milkweed sprouted. There she deposits her eggs from which hatch individuals, which carry on the migration as far north as possible." In this manner, by a series of overlapping relays, it pushes northward and has been found as far north as the southern end of Hudson Bay. Upon the approach of fall they are often seen in large flocks making southward. But the monarch has also become a great traveller in other directions. Mr. Scudder tells us that it has been found at sea five hundred miles from land, and that within the last forty years it has spread over nearly all the islands of the Pacific, and even to Australia and Java. "It has also appeared at various times in different places on the seacoast of Europe."

Another invertebrate form, that deserves more

than a passing mention, is the marine shore snail or periwinkle, that is abundant between tide lines along our seashores.

It is a native of Europe, and was first found in America in the Gulf of St. Lawrence in 1855, and from this point has gradually migrated southward. It had reached Halifax by 1869; was found on the Maine coast, 1870; the New Hampshire coast, 1871; Salem, Mass., 1872; Woods Hole, south of Cape Cod, 1875; New Haven, 1880; Delaware Bay, 1891; and Cold Spring Harbor, near the western end of Long Island Sound, 1900.

The periwinkle feeds on seaplants, and has been reported to be useful in clearing up the seaweed from oyster beds.

These are a few examples, for the most part of comparatively local wanderings of animals, which have been of interest mainly on account of economic considerations. Biologically these examples indicate the chief ways by which animals have become distributed throughout the world. And it seems reasonable to suppose, that the laws of distribution we find in force today, have been operative in the geological ages of the past, making for us our modern animal geography, and indirectly giving us industries, and shaping nine-tenths of the commerce of the world.

THE EVENING GROSBEAK.

Bird students will be interested to learn that the Evening Grosbeak has again appeared in the Maritime Provinces. They have been seen at Amherst, and Professor DeWolfe of Truro writes that they paid him two visits, in Truro, during the month of January.

The first record of these birds in the Maritime Provinces was from Truro, March, 1913 (See REVIEW, April, 1913). Last year they were reported from various parts of New Brunswick and Nova Scotia. I shall be pleased to receive notes of their appearance this year. Let all bird students be on the watch for these rare birds.

The description of this bird, given by Chapman, is as follows: "Male, forehead yellow, crown black, upperparts olive-brown, becoming dull yellow on the rump; belly and scapulars yellow; wings and tail black; end half of the secondaries and their coverts white. Female, brownish-gray, lighter on the underparts more or less tinged with yellow, especially on the nape; wings black, inner