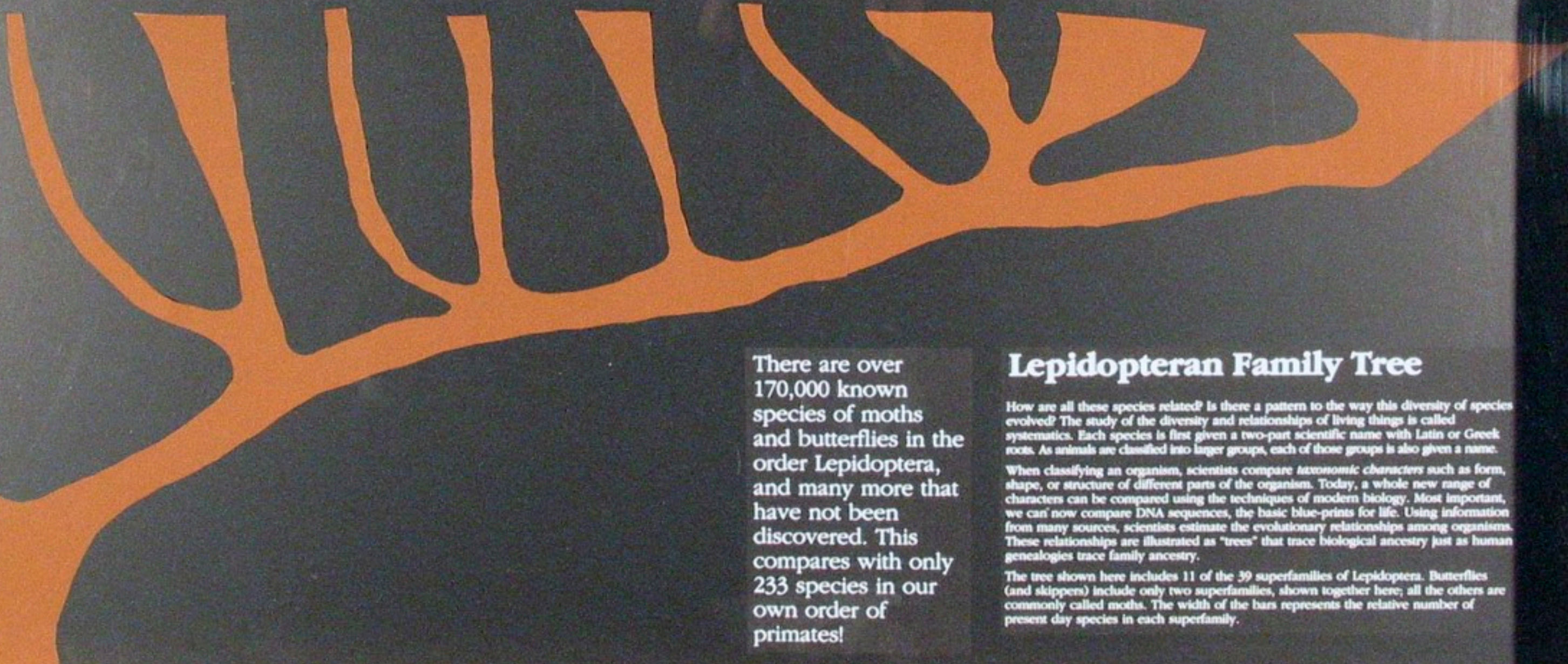
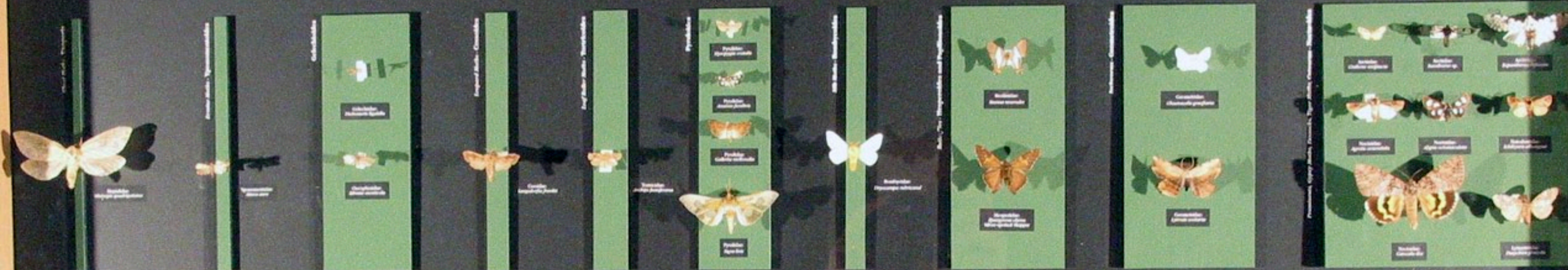


The Tree of Leps

Microlepidoptera

Macrolepidoptera



There are over 170,000 known species of moths and butterflies in the order Lepidoptera, and many more that have not been discovered. This compares with only 233 species in our own order of primates!

Lepidopteran Family Tree

How are all these species related? Is there a pattern to the way this diversity of species evolved? The study of the diversity and relationships of living things is called systematics. Each species is first given a two-part scientific name with Latin or Greek roots. As animals are classified into larger groups, each of those groups is also given a name.

When classifying an organism, scientists compare *taxonomic characters* such as form, shape, or structure of different parts of the organism. Today, a whole new range of characters can be compared using the techniques of modern biology. Most important, we can now compare DNA sequences, the basic blue-prints for life. Using information from many sources, scientists estimate the evolutionary relationships among organisms. These relationships are illustrated as "trees" that trace biological ancestry just as human genealogies trace family ancestry.

The tree shown here includes 11 of the 39 superfamilies of Lepidoptera. Butterflies (and skippers) include only two superfamilies, shown together here; all the others are commonly called moths. The width of the bars represents the relative number of present day species in each superfamily.