

book, The Origin of Species, to showing that it is possible to improve domestic plants and animals by careful breeding. Yet such breeding has never produced a new major class of plants or animals. It may result in important changes, but these changes are strictly limited in extent. An improved breed of horse is still a horse. An improved type of rose is still a rose.

If a scientist were actually to observe the beginning of a new important grouping of plants or animals, he would possess an important argument for suggesting the possibility that other such groups had originated in a similar way in the past. His observation would not prove this, but only suggest it. However, this sort of evidence is not available. No one has ever seen such a development. The theory of evolution is really an attempt to determine past history on the basis of circumstantial evidence.

(subhead) RECONSTRUCTING PASSENGER SCHEDULES

An illustration will show how difficult it is to reconstruct past history on the basis of present observation.

Let us put ourselves in the position of a whale living for a period of years somewhere along one of the main steamship routes from America to Europe. Let us imagine that this whale was able to distinguish the passenger ships of various lines, and that he could keep a record of the times when they went by. If he began his observations in 1904 he could probably make a chart that would be rather closely repeated year after year, and to a great extent week after week. Anyone who would examine the passenger ship schedules for those years would probably find that most of the lines followed a regular routine during the greater part of the year.

Our whale with a scientific turn of mind would soon observe that during the warmer part of the year the traffic always increased, and that it slackened somewhat during the other seasons. Being ignorant of the human custom of taking a vacation during the summer, he might puzzle his brain for an explanation of the increase in