bryological phases of recent fishes and the geological succession of the class." Whereupon he deduced the generalization, "The history of the individual is but the epitomized history of the race". Another notable result was the recognition and characterization of his so-called prophetic or synthetic types, that is, such as embrace features in their organization which afterwards become distributed among a number of groups, and are never recombined.

Even after Lyell won conviction for his "Uniformitarian doctrine", for which Hutton had also contended, —that the earth has not been subjected to cataclysmic revolutions, but has been shaped and fashioned throughout the countless ages by processes not differing in kind from those which are at work to-day, the palæontologists still remained true to Cuvier, and antagonistic to Lamarck. There were indeed occasional suggestions of fresh light, but practically the dawn dates from Darwin (1859); and palæontology, like the rest of biology, felt the new influence.

Palæontology after Darwin.

"This revolution", Prof. Marsh says, "has influenced palæontology as extensively as any other department of science, and hence the new period. . . . In the last epoch, species were represented independently, by parallel lines; in the present period, they are indicated by dependent, branching lines. The former was the analytic, the latter is the synthetic, period. To-day, the animals and plants now living are believed to be genetically connected with those of the distant past; and the palæontologist no longer deems species of the first importance, but seeks for relationships and genealogies connecting the past with the present."

If any one man deserves to be put at the head of a department in science in modern times, Karl Alfred von Zittel (b. 1839) may be called the first palæontologist of the day. And this not only for his endless detailed researches, but because as a teacher he has influenced so many, by his living voice, by his text-books, and by his unrivalled arrangement of the palæontological collection at Munich. His great *Handbuch der Palæontologie*, of which he was editor and part author, occupied