

5,000,000 for this stage. Assuming, for the sake of round numbers, as much as five years for a generation, we get 1,000,000 generations.

8. Earliest stage, down to the first fish-like creatures. Teeth and spines indicating the existence of fishes are known from the Upper Silurian. By carrying the earliest fishes down to the bottom of the Silurian, with 2,700,000 years' duration, and allowing three years for attaining puberty, the calculation results in 900,000 generations.

Further back we cannot go. We do not know of any Vertebrate remains from the Ordovician and Cambrian, which together represent 6,700,000 years, enough for at least half as many generations of Prochordate creatures. The pre-Cambrian or Laurentian epoch lies quite beyond the reach of calculation, nor have we any trustworthy fossil remains of living matter from these strata, to which, however, Haeckel and others refer the first beginnings of life.