

universe, has the surface of the glowing ball become condensed into a thin crust. That the temperature of the earth in remote times was much higher than it is now, is proved by many phenomena. Among other things, this is rendered probable by the equal distribution of organisms in remote times of the earth's history. While at present, as is well known, the different populations of animals and plants correspond to the different zones of the earth and their appropriate temperature, in earlier times this was distinctly not the case. And we see from the distribution of fossils in the remoter ages, that it was only at a very late date, in fact, at a comparatively recent period of the organic history of the earth (at the beginning of the so-called cænolithic or tertiary period), that a separation of zones and of the corresponding organic populations occurred. During the immensely long primary and secondary periods, tropical plants, which require a very high degree of temperature, lived not only in the present torrid zone, under the equator, but also in the present temperate and frigid zones. Many other phenomena also demonstrate a gradual decrease of the temperature of the globe as a whole, and especially a late and gradual cooling of the earth's crust about the poles. Brönn, in his excellent "Investigations of the Laws of Development of the Organic World," has collected numerous geological and palæontological proofs of this fact.

These phenomena and the mathematico-astronomical knowledge of the structure of the universe justify the theory that, inconceivable ages ago, long before the first existence of organisms, the whole earth was a fiery fluid globe. Now, this theory corresponds with the grand theory of the origin of the universe, and especially of our planetary