APPENDIX.

Arctic seas will be disposed of by some geologists, who will remind us that the saurians, and probably the ammonites, were endowed with a complicated optical apparatus, rendering them capable of using their eyes, not only for the distinct vision of objects differing greatly in distance, but also of using them, under widely differing conditions of light and darkness; and I readily admit the force of such observations.

But what are we to say as to the question of temperature? It was certainly necessary for an ammonite to have a sea free from ice, on which to float and bask in the pale rays of the Arctic sun; and therefore I claim a temperature for those seas, at least similar to that which now prevails in the British Islands: and I may add that the ammonite, from its habits, was essentially dependent on the temperature of the air, as well as on that of the water.

There is at present a difference of $49^{\circ}.5$ F. between the mean annual temperature of Point Wilkie and Dublin; and if this change of temperature be supposed to be caused by a change of the relative positions of land and water, the temperature of Dublin, or of some place on the same parallel of latitude, must be supposed to be raised to $99^{\circ}.5$ F.; while the temperature of the thermal equator will exceed 124° — a temperature only a few degrees below that requisite to boil an egg! I reject, without scruple, a theory that requires such a result, which must be considered as a minimum; as it is probable that the ammonite required a finer climate than that of Britain for the full enjoyment of his existence.

The theory of central heat, also, appears to me to be open to the same objection, as a mode of explaining this remarkable geological fact; for it will simply add

366