APPENDIX.

SOME CONCLUDING REMARKS ON THE EXTENT OF THE EFFECTS OF THE CAUSES OPERATING

UPON THE LAND OF THE SOUTHERN TEMPERATE ZONE.

The chief causes enumerated are:

I. The shortness of the southern summer.

2. The immense and disproportionate mass of water in the southern zone.

The operation of these causes has been powerful, silent and incessant:—and of their peculiar effect upon the land and land animals of the Austral portion of our globe, there can be no reasonable doubt. These two may be classed, then, as the first, efficient, and certain causes of the hebetude and degeneracy of the land animals of this less favored hemisphere.

Some other minor causes might be mentioned as auxiliaries; although their effects are not so well known, and cannot be with such unerring certainty established. They are mentioned as only probable causes, or as mere hypotheses.

They are:

,1. The less distance of the sun from the earth during the short southern summer—which has been glanced at before.

2. The difference in the MAGNETIC INTENSITY of the two hemispheres.

It is said that the electric or magnetic intensity of the northern hemisphere is positive, while that of the southern hemisphere is negative. And, also, that the magnetic attraction, or inductive influence of the sun, is greatest upon the southern hemisphere. Writers have embraced different opinions in regard to positive and negative electricity. The pupils of Franklin give the following definition:

"Positive electricity is an accumulation, or too great a quantity of the electric matter contained in a body; and negative electricity is where there is too little."

Until more is known of electricity and magnetism, no hypothesis built upon the foundation of these infant sciences, can be permanent. These sciences are almost as dark and unexplored as the continent of New-Holland itself. It seems, however, that there is something in the atmosphere of Australia that cannot be explained on any known principle of thermometrical heat, or barometrical pressure. Is it owing to electricity, or to some unknown and unexplained cause? If an Englishman, as stated in one of the notes, born fifty degrees north of the equator, could sustain with impunity, a heat of 110 degrees in Australia, it is the duty of the naturalist to search for the recondite cause. Much remains to be known of this region. It is to be hoped that a comparative degree of civilization will prevail over the vast surface of Australia before the close of the present century.

ŀ34