

favourable to the growth of Ferns are humidity, shade, and heat. These circumstances are most frequently combined in the highest degree in small and lofty tropical islands, where the air is charged with humidity, which it is continually depositing on the mountains, and thereby imparting freshness to the soil. Thus in Jamaica Ferns are to the Phanerogamiæ nearly in the proportion of 1 to 10; in New Zealand as 1 to 6; in Taiti as 1 to 4; in Norfolk Island as 1 to 3; in St. Helena as 1 to 2; in Tristan d'Acunha (extra-tropical) as 2 to 3. Ferns are also the most abundant Plants in the Islands of the Indian Archipelago.

It appears still further, that not only are certain Genera and Tribes of Ferns peculiar to certain climates, but that the enlarged size of the arborescent species depends in a great degree on Temperature, since Arborescent Ferns are now found chiefly within, or near the limit of the Tropics.\*

From the above considerations as to the characters and distribution of living Ferns, M. Ad. Brongniart has applied himself with much ingenuity, to illustrate the varying condition and climate of our Globe, during the successive periods of geological formations. Finding that the fossil

\* The few exceptions to this rule appear to be confined to the southern hemisphere, and one species is found in New Zealand as far south as lat. 46°. See *Brown in Appendix to Flinders's Voyage.*