

In May, 1875, Prof. Hartt received from the Emperor of Brazil the appointment of Chief of the Imperial Geological Commission for the survey of that empire, with whose physical history he had already so thoroughly identified himself.

The New York *Tribune*, of May 4th, 1878, contains the most concise account of the results of the Expedition which I have yet seen. It says:

The Geological Commission, or fifth expedition, with all its facilities and its unbroken two years and a half of work, must not be expected to have made the same striking discoveries, such as had been made by Professor Hartt before. He had already obtained the key to the geology of the country, and the labors of the Commission consisted mostly in tying together his discoveries and in greatly extending and elaborating them. The field parties moved too rapidly to allow of their making many topographical maps, and yet the existing maps of Brazil were so poor as often to render necessary their doing so. The region of the river Macuru, wholly unknown to science, and of the rivers Trombetas and Curua were carefully examined and mapped. The Carboniferous rocks, before known only to the south of the Amazonas, were traced to the north, where they contain the same fossils. The known area of Devonian beds was greatly enlarged, and underneath them was found the Silurian formation, containing fossils in places, and overlying the metamorphic region lying toward Guyana. To the south of Amazonas were found the same succession of beds, in a reverse order, demonstrating the existence of a palæozoic basin of which one can distinctly make out the three divisions, Silurian, Devonian and Carboniferous, the latter as a consequence of its super-position exposing the largest surface area.

The main portion of Brazil is made up of metamorphic rocks, which also form most of the coast line, and along the coast at intervals as far south as Bahia contain very fossiliferous Cretaceous basins. The work of the Commission has greatly increased the knowledge of these regions, and also those south of Rio, where fossiliferous palæozoic rocks are again found. In the province of Sergipe were found large tracts of partly metamorphosed deposits, supposed to be palæozoic. They form a large mountain range called Itabyana. Coal was found in three of the southern provinces. Its existence there was known before, but its character and relations had never been determined. It occurs only in thin beds, and is very impure, containing much sulphur and yielding a large per cent. of ash. Unless better coal is found and in larger quantities, its mining will be a total loss to the miner. The coast regions of the southern provinces also contain very extensive shell heaps, differing entirely in character from those of the north of Brazil. The gold and diamond regions were examined in many places, and the result of some of the explorations in the gold regions of "Minas Geraes" has been the formation of a rich company of Americans for the working of some of the mines. An able photographer accompanied most of the parties in the field, and over 500 negatives, mostly of larger size, testify to the faithful manner in which he carried on his part of

the wo
tion to

The
Brazil
poorly
Ferna
island
nishing
repres
Cave,

In t
museu
buildi
comple
fossils,
rooms.
immen
inverte
tories,
make u
been m

The
the An
of palæ
share o
beginn
printed
he has
the me
of worl
advanc

In
graph
Brazil
pages
Myth
the la
time o
of the
scienti
marve

Tha
brillia
of his