

the level of the sea is, therefore, exceedingly vague. The variability of the thermometric decrease with the absolute elevation, is particularly conspicuous in the limit of perpetual snow, of which we shall speak hereafter.

It will not be uninteresting to the reader if we particularize in this place a few of the extreme temperatures which have been observed on the globe.

Let us speak at first of extreme heat.

Between the tropics, Humboldt has frequently found the temperature of the surface, when exposed to the solar rays, to exceed 124° F.; and Arago, one day, observed $127^{\circ} 25'$ F. in the sand of the gardens of the Paris Observatory. Marès, while studying, in 1854, the action of sulphur upon vines attacked by the *oidium*, ascertained that the temperature of the arable soil, in the plain of Launac, near Gigean (department of Hérault), was between $123^{\circ} 45'$ and 131° F. The white quartzose sand near the Orinoco, which teems with a rich vegetation, has shown a temperature of 140° F. Finally, Nouet has marked 153° F. in the sands of Philæ, in Egypt.

In the shade, and in the open air, the following temperatures have been recorded by different observers :—

PLACE.	TEMPERATURE.	ACCORDING TO
At Paramatta, Australia, ...	$105^{\circ} 45'$	Lord Brisbane.
Cape of Good Hope,	$109^{\circ} 25'$ to 111°	Lacaille.
Pondicherry,	110° to 113°	Le Gentil.
Madagascar,	113° to $114^{\circ} 45'$	Le Gentil.
Esneh, in Egypt,	$114^{\circ} 45'$ to $116^{\circ} 30'$	Burckhardt.
Mourzook, in Fezzan,	$132^{\circ} 48'$	Ritchie.

Proceed we now to note a few facts respecting extreme degrees of cold. The lowest temperature observed at Paris was $12^{\circ} 10'$ F., on the 25th of January 1795. At Yakutsk, in Siberia, the thermometer has been known to sink in January to $0^{\circ} 15'$ F. Sir John Franklin observed $5^{\circ} 45'$ F. of cold at Fort Enterprize, in $64^{\circ} 5'$ N. lat. Black, in North America, endured a degree of cold represented by— $1^{\circ} 50'$ F. The mean temperature of Melville Island, according to Parry, is $10^{\circ} 5'$ F.; the *maximum* and *minimum*, respectively, $26^{\circ} 10'$ and $8^{\circ} 25'$ F. But the eminent explorer, Sir Roderick MacClure, observed 2° F., in January 1853, a month whose mean temperature is estimated at $9^{\circ} 20'$ F.

Between the two extremes of $132^{\circ} 48'$ F. observed in Fezzan, and $0^{\circ} 15'$ F. observed at Yakutsk, the range is $132^{\circ} 33'$ F.! Such are the surprising variations of temperature which man and animals can endure.