

GLACIERS OF NORTH AMERICA.

CHAPTER I.

INTRODUCTION.

It may be said of glaciers in general that they are bodies of ice formed by the accumulation and consolidation of snow in regions where the snowfall for a series of years is in excess of the amount melted and that they flow to regions where waste exceeds supply.

While a typical glacier is easily recognized, and there is no dissent from what is commonly understood by the name applied to bodies of flowing ice, yet the limitations of the term are indefinite. A type may be chosen, as the well-known Mer de Glace, Switzerland, for example, in which most of the characteristics of glaciers are exhibited. Other ice bodies are known, however, equally deserving to be classed as glaciers, that are markedly different from such a type. The vast ice sheet of Greenland exhibits a great departure from the ice streams of Switzerland in certain features; while the small ice bodies in the Sierra Nevada, California, present minor variations in other characteristics. In both of these illustrations, and in many others equally at variance with the type chosen, the term glacier is as appropriate as in the case of the ice stream on the border of the Vale of Chamounix.

The difficulties in determining the limitations of the term *glacier* may be illustrated by the use of the word *river*. When does a stream cease to be a brook, or a creek, or even a lake, since many lakes are but expansions of streams, and reach the dignity of a river? In a similar way, it is difficult to decide when an accumulation of snow acquires sufficient of the characteristics of a typical glacier to be included in the same class; or again, when a glacier loses motion and becomes a stagnant ice body, when it shall cease to be known by the title it earned when it was an avenue of ice drainage.