ridges) are combined into an amphitheater or circ. In Fig. 163, A*rs*B represents the course of the stream, as in Fig. 162; and A*ef*B the eroded ridge, which has lost at *e* much of its height.

The ascent of the mountain by following the valleys is in such a case wholly impossible; it can be accomplished only by finding the ridge that has held on to its summit connection with the peak. On Tahiti the ridge by which the author made his ascent to *b*, the peak called Aorai, about 6000 feet in height, narrowed to two or three feet, and for a short distance to a single foot, putting risks into the excursion, since the slope either side fell off for 1000 to 2000 feet at an angle of 60° to 70°. Between *b* and *a* (the highest peak, Orohena) the "divide" was reduced in height more than 1000 feet, and the summit at *b* was but six feet broad. All the outlines of the original crater had disappeared. The lavas usually lie in beds dipping seaward, but those of the central precipices were without bedding.

From the steps in the work of erosion over such isolated volcanic mountains it becomes evident that further progress would result in narrower, thinner, and if possible steeper ridges; and, even when nearing the end, in sharp crests and ridges, which finally would be likely to disappear through weathering agencies. A flattening of the mountain would come at the very end, and not be a step in the progress toward it.

These explanations show that a river rising in high mountains has (1) its *torrent-portion*, and (2) its *river-portion*, along which it is bordered by flood-grounds.

The river-portion consists (1) of an upper section of rapid waters, along which erosion at bottom is continued, and the amount removed exceeds that of deposition; (2) a section of feebler descent and slower flow, where the removal by erosion in floods does not exceed that of subsequent deposition, so that the stream has ceased efficient work. It has reached *base-level* — as the condition has been termed by J. W. Powell. This base-level section may end below in a *decrepit* portion, over which deposition along the bed exceeds the amount removed in floods, so that thus a silting up of the channel, and also a corresponding rise of the flood-grounds, go on.

In the small Pacific islands these sections of the river-portion of a stream are short and not always present. But on the western side of Maui there are remarkable examples of a decrepit ending; for, while the valleys in the wet and cool mountains are wide and profound, as the map shows, the stream over the leeward (and hence nearly rainless) plain at the western foot is reduced to a narrow trench, which part of the time is dry.

3. *River valleys of the continents.* — Over a continent where declivities are long, and the gently sloping plains have large extent, — often hundreds of miles in width, — each of the divisions of the *river-portion* of a stream, that of rapid-working waters and that of *base-level*, is often of great length. Moreover, along many streams there are often several base-level portions, made by obstructions; but where this is the case, as Powell remarks, it is evidence of the relatively recent origin of the stream; for the wear of ages tends to