Glacial-like striations formed in less than 90 seconds

Michael J. Oard

Secular scientists postulate there were five major ice age periods (table 1). The Pleistocene is a geological period that generally brackets the recent ice ages within the past 2.6 Ma. This period does not reflect the post-Flood Ice Age, which generally corresponds to the uniformitarian 'last' ice age.

Pleistocene sediments or geomorphological features before the last ice age could represent either activity before an area was glaciated or Flood features. An example of the latter is found in the 'terrace' remnants along the northeast Wind River Mountains of Wyoming.[1] The remnants are commonly thought to be eroded outwash features from early ice ages. Yet, they are not connected to a moraine or any other glacial features. A better explanation is that they are pediments formed during channelized Flood runoff that were later dissected to remnants.

Secular scientists once believed there were only four ice ages, but now they propose 50 Pleistocene ice ages. However, the evidence on the land surface and in the ice cores from Greenland and West Antarctic reveal just one Ice Age. The other 49 are determined by wiggles in oxygen isotope ratios in deep-sea cores.[2] This determination came from their need for long ages and was justified by the weak Milankovitch mechanism, the astronomical theory of the ice ages.[3] They explain the lack of evidence for previous ice ages on the continents by saying that the evidence for each previous ice age was destroyed by the succeeding one.

Regarding pre-Pleistocene or 'ancient' ice ages, secular scientists are adamant that there were four main ice age periods, each lasting for millions of years (table 1). Because of their strong commitment to ancient ice ages and because many of the diagnostic features are marine and from a tropical paleolatitude, they have been forced to conclude that the earth was totally or almost totally glaciated—more than once. They call this 'snowball earth'. The fatal flaw with snowball earth is that it would be nearly impossible to melt the ice.[5]

Several secular authors have challenged some of the ancient ice ages, such as Shermerhorn, who warned that other geological processes can duplicate the major glacial diagnostic features, such as striated bedrock.[6] Moreover, an 'Eocene' landslide, now at the top of the Gravelly Mountains of Southwest Montana,[7] has resulted in striated stones in the landslide material and striated bedrock. Mass flows can produce these same ice-age–like features, including supposed diagnostic indicators.[7,8] More recently, another report in the literature shows that landslides can produce not just glacial-like striations, but also several other features thought diagnostic of glaciation.[9]

A glacial-like striated pavement with other 'glacial-diagnostic' features

A rock avalanche on Jiweishan Mountain, China, occurred on 5 June 2009, killing more than 70 people. It also destroyed farms and covered up an underground iron mine.

Some researchers who investigated the avalanche came to believe that the slide was a grain flow with low dynamic friction, and that the base of the slide was heated to about 800°C, producing high-pressure steam and carbon dioxide. They removed a thin covering of landslide debris on the mountain, providing a rare opportunity to examine the sliding surface. They were surprised to find "a well-preserved, polished and striated pavement … highly reminiscent of a classical striated rock pavement from beneath a glacier".[10] Moreover, the striations and grooves were not always straight, but sometimes sets of striations crossed each other at an angle of up to 30°. This was previously thought to be diagnostic of glaciation, but this avalanche shows it can also be explained by shifting rocks in the bottom of the slide.

Moreover, the slide displayed chattermarks and plucking scars on the surface. Chattermarks are thought to be indicative of glacier sliding (figure 1). Because some of the striations had beginnings, they are reminiscent of nailhead striations thought to be produced only by glaciation.

Example offers more support that 'ancient ice ages' are Flood landslides

Several creation scientists have provided evidence that diamictite, a non-genetic term for a non-sorted or poorly sorted sedimentary rock with

Table 1. The five main ice age periods within the uniformitarian paradigm and their inferred evolutionary age range[4]

Geological period	Secular approximate age range
Pleistocene	11,700 ka to 2.6 Ma ago
Late Paleozoic	256 to 338 Ma ago
Late Ordovician	429 to 445 Ma ago
Late Precambrian	520 to 950 Ma ago
Mid Precambrian	2.2 to 2.4 Ga ago

Figure 1. Chattermarks from the Laurentide Ice Sheet on a polished, striated granite bedrock surface from Acadia National Park, Maine, USA

a wide range of particle sizes, and other glacial-diagnostic features can be a result of gigantic submarine debris flows during the Flood.[11–14] The debris flows would be much larger than those of today because the Flood rapidly laid down huge volumes of sediments over large areas. An earthquake or some other perturbation (e.g. crater impact or tsunami) could easily start a huge slide that would flow rapidly and mostly come to a halt on a generally level surface, as with the Dwyka 'tillite' in South Africa.

If such a relatively small slide as the Jiweishan Mountain slide (a true post-Flood landslide) produced friction temperatures up to 800°C with high-pressure steam and carbon dioxide, the much larger slides of a global Flood would easily and quickly have slid long distances. Submarine landslides would produce all the so-called indicators of glaciation.

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