

# Yedomas show one ice age

Michael J. Oard

Secular scientists continue to claim that there were dozens of Pleistocene ice ages of various intensities. The number has climbed over the years from one when the Ice Age was discovered in the mid-1800s, to four ice ages in the late-1800s to mid-1900s, to about 50 in the 2000s.<sup>1</sup>

## The astronomical theory of the ice ages fuelled multiple ice age ideas

The shift from one to four ice ages was based on flawed research done in the northern foothills of the Alps<sup>2</sup> and the United States' Mid-West.<sup>3</sup> Geologists then 'saw' about four ice ages almost everywhere for 60 years. This is a good example of how the reinforcement syndrome works. The original research gets accepted as foundational and thus biases subsequent research. The results are tailored to support the 'foundational' research.<sup>4</sup> Ice Age expert D.Q. Bowen comments:

"Indeed it could be said that force-fitting of the pieces into pre-conceived pigeon-holed classification is what is almost a way of life for the Quaternary [Ice Age] worker ... . Tendencies to oversimplify in this way lead to new discoveries being forced into a pigeon-holed classification. Such arbitrary methods tend to perpetuate an illusion of security and precision in an apparently repeated confirmation of the original model. This tendency to confirm discoveries from limited amounts of data has been called The Reinforcement Syndrome by Watkins (1971), who cites the classical four-fold Alpine

subdivisions of the Pleistocene as an example."<sup>5</sup>

A revival of the astronomical theory of the Ice Age caused this shift from four to eventually 50 ice ages. It started from a paradigm-changing 'verification' of the astronomical theory of the ice ages by Hays and colleagues.<sup>6</sup> The astronomical theory has since been assumed as fact, and has been used extensively for Ice Age research and dating pre-Ice Age strata. A new reinforcement syndrome was established.

## Numerous problems with the astronomical theory

Recently, Jake Hebert from the Institute for Creation Research has shown that, because of the changed date for the last magnetic reversal, the paper by Hays and others does not support the astronomical theory.<sup>7,8</sup> The changed date resulted in the Hays *et al.* deep-sea cores not having the 'correct' frequencies calculated for the astronomical cycles. So, the theory really has not been proven. The astronomical theory has numerous

other flaws.<sup>9</sup> The mechanism is too weak to cause ice ages.<sup>10-12</sup> For instance, the main 100 ka eccentricity cycle has extremely little change in the distribution of solar radiation over the earth, yet an ice age requires a lot of change. So, research predicated upon the astronomical theory of the ice ages, including thousands of papers, is flawed, even by uniformitarian reckoning. One wrong premise most often leads to wrong conclusions.

## Evidence strong for only one ice age

Glaciers move and deposit rocks and soil in unique ways. These deposits provide abundant evidence for only one ice age. Sequences in some areas can be interpreted as from multiple glaciations, such as at the boundary of ice sheets. However, these areas could just as easily be seen as the deposits of multiple pulses from one glaciation. For instance, researchers from the University of Alberta at Edmonton, Canada, have scaled back the number of ice ages in western Alberta from around four to just one.<sup>13,14</sup> Moreover,



Figure 1. Permafrost thaw hollows and ponds due to local melting of permafrost on Baffin Island, Canada

Image: Steve Jurvetson/CC BY 2.0

**Table 1.** Five of the most significant evidences against multiple ice ages

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|--|
| 1) Generating even one uniformitarian ice age is climatically very difficult           |
| 2) Most glacial debris is from the 'last' ice age                                      |
| 3) Loess is mainly from the 'last' ice age   |
| 4) Driftless areas north of the ice sheet boundary should not exist                    |
| 5) Extinctions happened mainly after the 'last' ice age, why not in the previous ones? |

the volume of loess (wind-blown silt) from the Pleistocene also suggests only one ice age, since it displays one period of loess deposition associated with the 'last' ice age.<sup>15,16</sup> Table 1 presents the arguments in favour of just one ice age.

### Yedomas in Siberia, Alaska, and the Yukon

Just recently, another indicator of just one ice age has emerged. Yedomas are a special type of permafrost that contain a large amount of organic matter (about 2% carbon by mass) and from 50 to 80% ice by volume.<sup>17</sup> The ice is in the form of large ice wedges and ice layers and lenses. Permafrost covers 23 million km<sup>2</sup>, or 24%, of land in the Northern Hemisphere. Yedomas cover substantially less—1,387,000 km<sup>2</sup> in north-east Siberia, Alaska, and Yukon Territory of north-west Canada.<sup>18</sup> They are often tens of metres thick with a maximum of about 50 m. Permafrost was 52% greater at the peak of the Ice Age than today,<sup>17</sup> having expanded south of the boundaries of the ice sheets and subsequently melted back toward higher latitude.

Because of subsequent thawing of yedomas, likely during the warming after the disappearance of the Cordilleran, Laurentide, and Scandinavian ice sheets,<sup>17</sup> hollows formed on the yedoma surfaces leaving behind a hill and basin topography called thermokarst (figure 1). Sometimes mass wasting, the downslope spreading of sediments, occurs during melting. Yedomas contain most of the

woolly mammoths and other animals entombed in the permafrost.<sup>19</sup>

Global warming enthusiasts are concerned about the effect the melting ice in the yedomas will have on global warming, since the organic matter is only partially decomposed and will release methane and carbon dioxide into the atmosphere. Thus, the yedomas are called 'Pandora's freezer', since a huge increase in greenhouse gases could act like a 'carbon bomb' and push the climate over a 'tipping point'. This feeds into another paradigm shift.

It is now believed that the climate has 'thresholds', which, once exceeded, plunge the climate into a super warm or super cold state. This belief has the temperature changing up to 10–20°C in a few decades,<sup>20</sup> and even as little as 1–3 years!<sup>21</sup> The idea of 'abrupt climate change' was first fuelled by numerous abrupt changes in the oxygen isotope ratio, assumed proportional to temperature, in Greenland ice cores.<sup>22</sup> However, these abrupt climate changes are within the Ice Age portion of the core. They can be attributed to decadal climate fluctuation caused by changes in the amounts of volcanic aerosols in the stratosphere within the biblical Ice Age model.<sup>22</sup> So, abrupt climate change during the Ice Age does not apply to today's climate.

Practically all the organic matter in yedomas is from plants with much of it grass and sedges,<sup>23</sup> supporting Guthrie's contention that the non-glaciated lowlands of Siberia, Alaska, and the Yukon were part of the

Northern-Hemisphere-wide 'mammoth steppe'.<sup>24</sup>

The origin of yedomas is a bit of a mystery. The sediments are primarily loess,<sup>17</sup> but there is also a minor amount of fluvial and lacustrine sediments. Of interest to creation science is that yedoma permafrost is *not* forming today, which violates the uniformitarian principle, like so many other aspects of geology<sup>25</sup>:

"Yedoma deposits are ancient deposits and there is no known recent accumulation. ... Yedoma accumulation ended in most places abruptly at the late Pleistocene-Holocene transition ... , when thermokarst processes rapidly began reconfiguring local hydrology and deposition/erosion patterns."<sup>26</sup>

### Yedomas also show one ice age

Of particular interest to creation science is that the yedomas only formed during the 'last' ice age:

"Yedoma deposits started accumulating during the last ice age. No older yedoma deposits older than the last interglacial (MIS-5e; 130–115 thousand yrs BP) are described so far (Schirmer *et al.*, 2013)."<sup>27</sup>

Since, according to the astronomical ice age theory, the next ice age is due soon after the ending of the present Holocene interglacial, there are two reasons why the present-day yedomas and their thermokarst modifications should be preserved and covered over with loess associated with the next ice age. First, since loess makes up the yedomas from the most 'recent' ice age, one would expect by uniformitarian reasoning that yedomas from previous ice ages would also occur. Second, since each ice age is said to be much colder in the polar areas than today, these very cold temperatures would be conducive to the preservation of both the loess and yedomas. So, yedomas from previous ice ages, if real, should have been preserved. Of course, neither

the supposed ‘earlier’ loess deposits or yedomas exist. The preservation of yedomas only from the most ‘recent’ ice age argues against these supposed previous ice ages, supporting the single ice age posited by creation scientists.<sup>28,29</sup>

Uniformitarian scientists are not without explanations, or further hypotheses, to explain away difficulties. They seem to always paper over a theoretical vacuum that would challenge their paradigms of uniformitarianism, deep time, and evolution. It is no different in the case of the missing yedomas. The researchers claim that the yedomas melt after each ice age:

“We suppose that yedoma deposits degraded during former warmer-than-Holocene (e.g. Tourney and Jones, 2010) interglacial periods [emphasis added].”<sup>27</sup>

This is a weak response. Yes, the last interglacial is claimed to have been a little warmer than the Holocene.<sup>30</sup> However, uniformitarians cannot argue that the other 50 or so interglacials were significantly warmer. This is because they interpret the amplitudes of oxygen isotope ratios from deep-sea sediment cores to be a measure of global ice volume. Because these amplitudes become *smaller* farther back in time, uniformitarians cannot claim that these earlier interglacials were warmer. And could a little more warmth during the most recent interglacial really melt all the ice in the yedomas? If this were the case, the amount of methane and carbon dioxide added to the atmosphere would skyrocket, supposedly causing global warming and no further ice ages. This huge addition of greenhouse gases would show up in the most recent supposed glacial/interglacial fluctuations in East Antarctic ice cores, but it does not.<sup>31</sup> The ‘interglacial’ rise in greenhouse gases is about the same as in the Holocene before the Industrial Revolution.

If “the present is the key to the past”, many of the 50 other earlier

ice ages would surely have also left yedoma deposits, yet these supposed yedoma deposits do not exist. The straightforward interpretation of the observations is that there was only one ice age.

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