

Accepted Manuscript

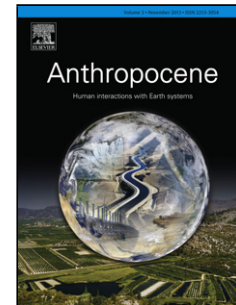
Title: Geographic Evidence of the Early Anthropogenic Hypothesis

Author: William Ruddiman

PII: S2213-3054(17)30050-4

DOI: <https://doi.org/10.1016/j.ancene.2017.11.003>

Reference: ANCENE 157



To appear in:

Received date: 5-10-2016

Revised date: 25-10-2017

Accepted date: 14-11-2017

Please cite this article as: Ruddiman, William, Geographic Evidence of the Early Anthropogenic Hypothesis. *Anthropocene* <https://doi.org/10.1016/j.ancene.2017.11.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Viewpoint:**Geographic Evidence of the Early Anthropogenic Hypothesis****William Ruddiman¹**

¹ Corresponding Author. Department of Environmental Sciences, University of Virginia,
Charlottesville, VA 22904. Email: wfr5c@virginia.edu

William Ruddiman¹

¹ Corresponding Author. Department of Environmental Sciences, University of Virginia,
Charlottesville, VA 22904. Email: wfr5c@virginia.edu

Abstract

The early anthropogenic hypothesis claims that millennia ago farming began to transform landscapes sufficiently to emit greenhouse gases and extend the natural warmth of the current interglaciation that had been initiated by orbital variations. Part of the debate over the hypothesis during the last dozen years has centered on determining the best orbital analog to the Holocene among prior interglaciations, all of which must have been natural (non-anthropogenic) in origin. Since 2009, dozens of papers have assembled physical geographic evidence that points to the kind of large early agricultural impacts posed by the early anthropogenic hypothesis. These new findings include: pollen and archaeological evidence of carbon dioxide (CO₂)-emitting early forest clearance in Europe and China, along with archaeobotanical and archaeological evidence of methane (CH₄)-emitting rice irrigation and livestock tending across southern Asia. In addition, mapping of ¹⁴C-dated peat deposits has

Download English Version:

<https://daneshyari.com/en/article/8867191>

Download Persian Version:

<https://daneshyari.com/article/8867191>

[Daneshyari.com](https://daneshyari.com)