The Center for the Study of Origins
Spring 2018 Symposium:
Volcanoes, the Failures of the Gods, and the Collapses of Empires
February 9-10, 2018
-Free and Open to the Public-

Friday, February 9
Keynote Speaker: Clive Oppenheimer, Cambridge University
Topic: The Long-range Consequences of Volcanic Eruptions
7PM, Benson Earth Sciences Building Main Auditorium (room 180)
CSO Intro: Carol Cleland, Director
Introduction of Speaker: Payson Sheets
Light Refreshments to follow (rm 380)

Saturday, February 10
Part 1: Causes of the intense cold and drought. Prof. Payson Sheets presiding
Benson Earth Sciences Building Main Auditorium (rm 180)

8:15 AM – Light breakfast/nametag pickup (Benson Earth Sciences Lobby)
8:25 – Welcome, Carol Cleland, Director, Center for the Study of Origins
8:30-9:00 – Payson Sheets, CU Boulder: Introduction, nature of stress, impacts, and controversies
9:30-10:10 – Kees Noreen, Utrecht University: Timing and impact of El Chichon’s mid-6th century eruption
10:10-10:20 – Questions and answers
10:20-11:00 – Robert Dull, Univ. Of Texas Austin: The magnitude 7 eruption of Ilopango: Environmental impacts on the Classic Period Maya and the world
11:00-11:10 – Questions and answers
11:10-11:30 – Discussion

11:30AM – 1:00PM: Break for lunch

Part 2: Cultural disruption during the 6th Century - Prof. Sam Boyd presiding
Benson Earth Sciences Building Main Auditorium (rm 180)

1:00-1:20 PM – Sam Boyd: Introduction
1:20-2:20 – Kyle Harper, University of Oklahoma: "The Ice Age Cometh: The 536 Event as a Turning Point in Roman History (40-minute talk with 10-minute Q and A)
2:20-2:40 – Break
3:40-4:10 – Terry Kleeman, CU Boulder: Ash fell from a cloudless sky: Chinese Records of the 536 CE Event (20-minute talk with 10-minute Q and A)
4:10-5:00 PM – Comments, questions, discussions
Volcanoes, the Failures of the Gods, and the Collapses of Empires: The 6th Century CE

One of the two most severe and long cold periods of the past few thousand years began abruptly in 536 CE. The cold lasted for many years, and suppressed evaporation of water from oceans, therefore reducing precipitation resulting in droughts in many areas of the world. The cause evidently was immense volcanic eruptions. In this symposium, we will explore the controversy over which volcanoes were the instigators as well as the historical and religious consequences of the climate changes due to the eruptions.

The sustained cold and drought caused agricultural crop failures among many civilizations, leading to starvation, disease, migrations, and a collapse of confidence in religion and politics. Elites, supposedly in contact with deities and the supernatural domain for the benefit of societies, were overthrown on various continents, leaving the way open for the emergence of different social orders and religions. The death rate was in the range of 75% in some areas where there are records, resulting in fundamental demographic collapses as well as markedly different economic, political, social, and religious orders. The greatest empire in the New World, Teotihuacan in Mexico, was overthrown by internal revolt against the elite and their religion. Empires in China also were overthrown at the same time, as the Emperor lost the Mandate of Heaven. The crisis in the Middle East, with dissatisfaction with the Eastern Orthodox Church, may have opened the way for the emergence of Islam.

In this symposium, we adopt a “consilience” approach, elaborated by E. O. Wilson, which holds that a major event is best understood by combining the full range of scholarship, including the humanities, social sciences, and natural sciences. Ice core data from Greenland and Antarctica indicate that two gigantic explosive eruptions occurred in the AD 530s, creating volcanic ash clouds in the upper atmosphere that blocked sunlight from warming the planet. The sulfur aerosols in the stratosphere further enhanced the cooling and duration of the climatic crisis.

The symposium will begin Friday evening 9 February with a Keynote address by Dr. Clive Oppenheimer from Cambridge University.

The symposium will continue on Saturday morning with Tom Casadevall discussing the nature of the large explosive eruptions. That is followed by a healthy scientific controversy that has developed in exploring whether the eruption of El Chichon volcano in Mexico, or Ilopango in El Salvador, was an instigator. Various scholars will examine the social, political, economic, and religious impacts of the crisis in different parts of the world during Saturday afternoon.

The afternoon session will consider the impact of the 536 CE event on history and historical records. The speakers will address the manner in which the volcanic eruptions and their climatic effects during this time shaped politics, culture, and religious movements (as well as the inevitable intersection between all these domains). Kyle Harper from the University of Oklahoma will discuss the further decline of Rome in the 6th century CE due to the 536 CE event. John Haldon of Princeton University will explore the increase in aridity in the Arabian Peninsula in the wake of the 536 CE event and the rise of Islam. Terry Kleeman from CU Boulder will examine the manner in which climate change during this time appears in Chinese records and altered the political landscape of that region. We will have time for questions, answers, and interaction among the presenters and the audience.