ENGLAND'S JURASSIC COAST

Rocks, Fossils, and Biblical History

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CONTENTS

Durdle Door, Dorset at sunrise.

1

INTRODUCTION

Britain's outstanding Jurassic Coast runs along the shoreline of two of its southern counties, the English Channel coast of East Devon and West Dorset. It runs from Orcombe Point near Exmouth in the west, to Old Harry Rocks and Studland Bay in the east (figure 1.1). With its important geological features and many fabulous fossils, it was declared a UNESCO Word Heritage Site in December 2001. It is a very scenic area, with many well-visited landmarks, but the coast has also become an icon for belief in naturalistic evolution and 'deep time'.

From one end to the other, the coastline is 95 miles (154 km) long. Within the secular geological time-frame its **rock formations** are said to have formed up to about 250 million years (Ma) ago. This includes sedimentary layers (or strata) from the so-called **Permian**, **Triassic**, **Jurassic**, and **Cretaceous** Periods (figure 1.2). (Words in bold type throughout this book are defined in the Glossary). Although it is called the Jurassic Coast, much of the geology exposed in Devon consists of only the Triassic and Cretaceous, so the Jurassic rocks are actually missing. More recent geological and oceanographic processes have shaped the landforms, even in recorded history; for

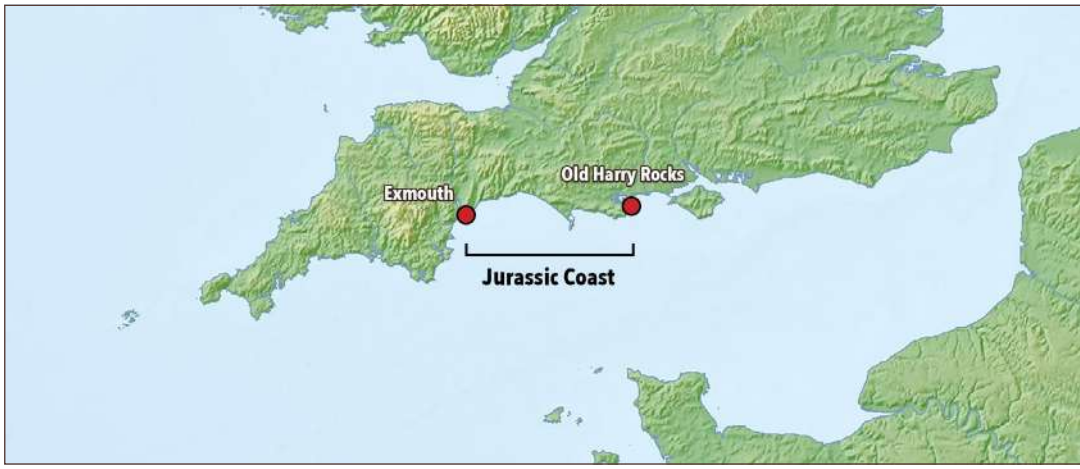

Figure 1.1: The Jurassic coast runs from Exmouth in Devon to around Old Harry Rocks in Dorset. Both counties are situated in Southwest England.

Figure 1.2: Geology of the Jurassic coast, from Permian (red) and Triassic (purple) in the West, to Jurassic (blue) and Cretaceous (green) layers in the East.

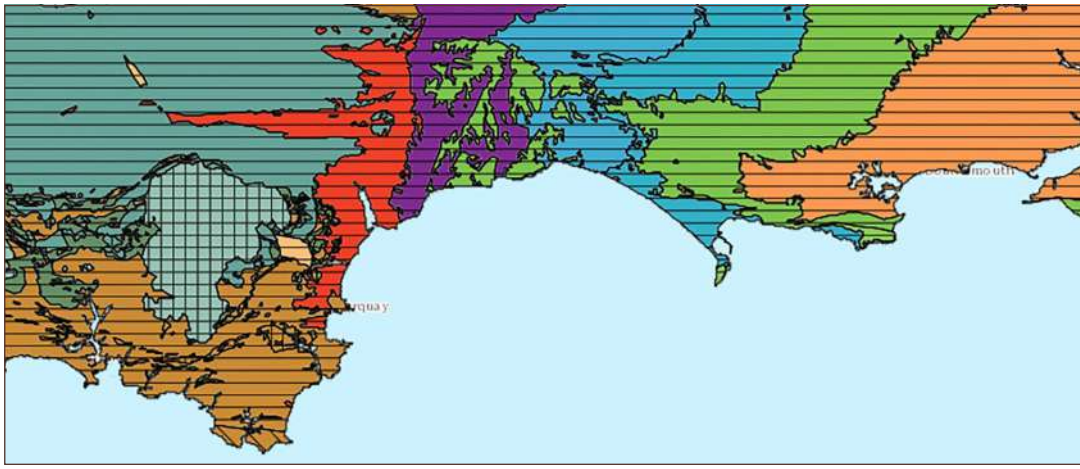

Figure 1.3: Triassic sandstone cliffs, with Cretaceous peaks. Salcombe hill next to Sidmouth, looking eastwards towards Branscombe.

example, river estuaries have silted up, gravel beaches have formed and changed in shape, and cliffs have eroded.

During the 19th century this stretch of coast provided some important fossils that captured the interest of the leading geologists. The finds were then passed to collectors and displayed in the London museums. Many of the specimens had been found by pioneering fossil collector Mary Anning, who was from a poor family of fishermen in Lyme Regis, Dorset.

Today, all such museums, together with local museums and fossil shops in coastal towns, categorically date the fossil finds to millions of years, and few people seem aware of the problems with this idea. It is important to ask whether such claims are supported by the evidence. The purpose of this book is to tackle and re-evaluate all the evidence—the results may surprise you.

In the 17th and early 18th centuries the fossils and strata were interpreted by the leading authorities to have been laid down by Noah's Flood, approximately 4,500 years ago. But that was increasingly rejected through the 19th century in favour of belief in deep time—the idea of long-ages, steady rates of deposition, and supposed gradual evolution. We strongly dispute this framework in this book.

At first, we will consider the evidence of rock strata and fossils, and the historical developments of ideas about how the coast was shaped and formed. This includes a brief discussion of the philosophy of science, and evidence for rapid burial and **sedimentation**. In later chapters we

will look at the coast in more detail—the red rocks of the Permian and Triassic (figure 1.3), the grey rocks of the Jurassic (figure 1.4), and the white rocks of the Cretaceous (figure 1.5). We will also look at the broad picture of the formation of the strata from the perspective of the biblical Flood.

As well as looking at the rocks, we will consider the people connected to the coast. We have already mentioned Mary Anning, a notable Christian woman, but we will also learn about gentlemen Anglican scientists such as William Buckland and William Conybeare. In the 19th century, there was a trend to accept belief in long ages in the Church, but this led to some confusion, particularly on the part of Buckland.

Finally, we will consider evidence that the river estuaries have silted up in recorded history, the development of beaches, and the erosion of cliffs, with loss of some archaeological features to the sea. The siltation of river estuaries and erosion of cliffs provides further evidence that the landforms with which we are familiar today are still recovering from a major geological and climatic catastrophe that occurred in the recent past, measurable in thousands, not millions, of years.

Figure 1.4: A major fault runs along the eastern coast, uplifting the Jurassic layers. This protects the softer Cretaceous rocks inland, although the sea gradually breaks through, e.g., at Stair Hole.

Figure 1.5: Old Harry Rocks at the eastern end of the Jurassic coast.

Stair Hole cove Lulworth, showing folding in the Jurassic limestone.

2

THE SCIENCE OF GEOLOGY IS BUILT UPON FLAWED FOUNDATIONS

Is it possible that the science of geology took a wrong turn in the late 18th and early 19th centuries, and then proceeded to build a mass of knowledge upon a false foundation—like a house built upon the sand? This book provides evidence that flawed reasoning has compromised conventional geology.[1] We will see how the geology of England's iconic Jurassic Coast points in a different direction; that is, to the rapid burial of fossils, and the quick formation of the sedimentary layers. Thus, we will dispute the long age interpretation. Figures 2.1 and 2.2 show how we interpret the evidence from the perspective of biblical Flood geology.

Two specific errors in scientific thinking have led to the misdirection of geology as a science. Firstly, the biblical account of Noah's Flood has been rejected from scientific discourse, when in reality it ought to be treated

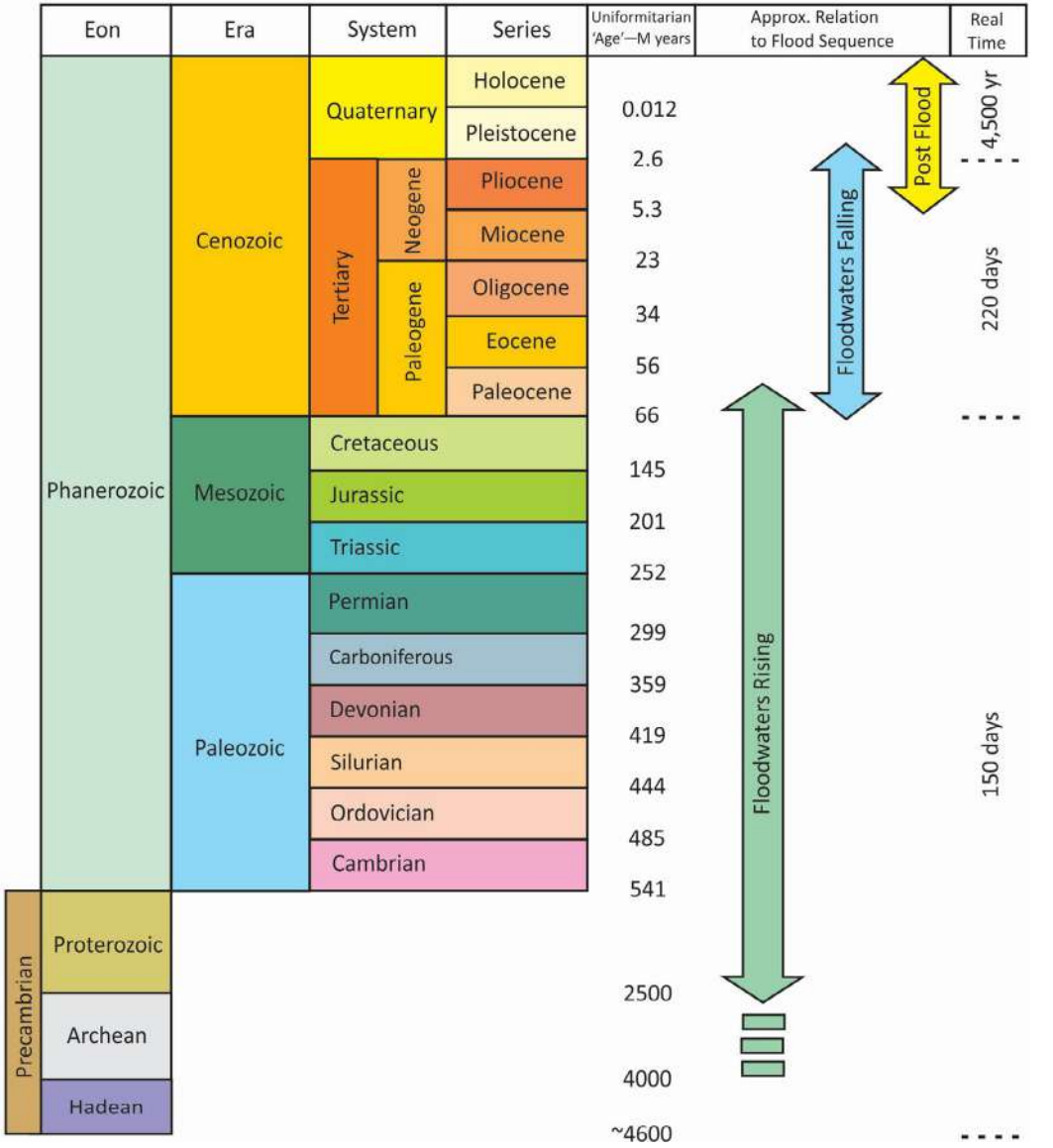

Figure 2.1: The Geological Column; the higher parts are exposed along the Jurassic Coast. This gives the uniformitarian dating, and the proposed flood geology interpretation. The exact boundaries of the arrows are still uncertain, but indicative of our flood model.

with respect as an inspired record of events. Secondly, scientists ignored a central problem in the philosophy of science; that is, how to make sense of the past only from observations gathered in the present. With the historical sciences, researchers cannot go back in time to validate claims as they can with operational (experimental) science. Observations are necessarily limited by time and space, and physical processes may have changed—we cannot go back in time to gather fresh data to find out what happened in the past.

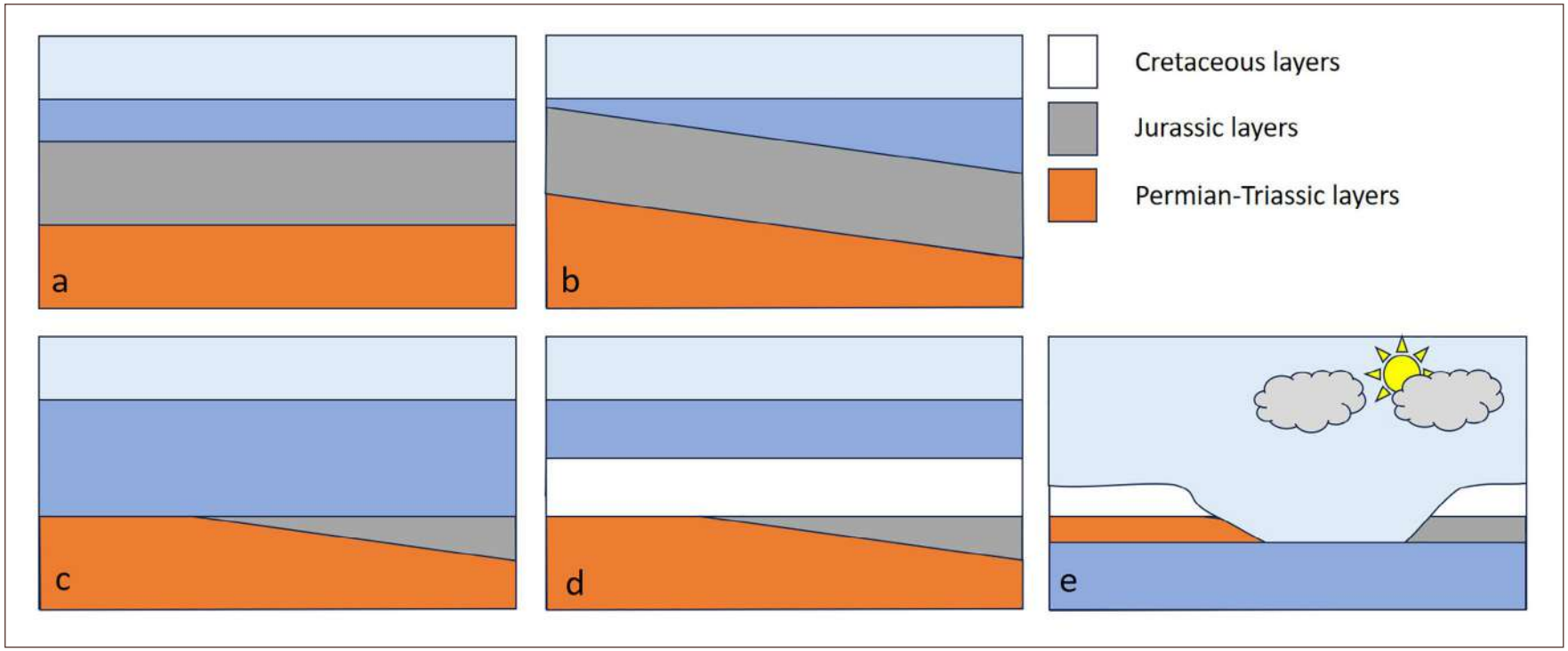

Figure 2.2: How do we explain the layers from the perspective of the biblical flood? This image is adapted from secular geology which appeals to long ages. The drawing is looking north, with West on the left and East on the right. (a) Water rises during the flood and deposits the Permian, Triassic and Jurassic layers. (b) The land is uplifted in the west as the Atlantic opens up. (c) The flood waters erode the sediment to form a flat gap. (d) With the flood waters prevailing on the Earth, the increasingly pure Cretaceous layers are laid down due to massive phytoplankton blooms. (e) Once the waters receded, Permian/Triassic layers are visible in Devon overlain by the Cretaceous layers, and Jurassic and Cretaceous layers in Dorset.

FLOOD ACCOUNTS AND THE BIBLE

Atheists and sceptical scientists disbelieve the biblical account of the Flood. Sadly, they often reference liberal Bible critics who claim the Flood story was added to Scripture, perhaps embellished for religious or theological reasons, and not because it relays information about a real event. The 19th century lawyer-turned-geologist Charles Lyell and Charles Darwin dismissed this biblical narrative, seeking to remove the Scriptures from science.[2] The biblical account is indeed a theological message, but we believe that the Flood account is in the Bible because it was also an important historical event, and one of global scale (figure 2.3).

Many other ancient cultures from around the world had flood accounts, but especially in the Middle East—for example the well-known *Epic of Gilgamesh* from Mesopotamia (figure 2.4).[3] These further validate the biblical Flood narrative as a record of an historical event, although the description of the 'Ark' in the *Epic of Gilgamesh* is highly symbolic and unrealistic as a description of an actual boat. On the other hand, the Genesis account reads like a ship's log, and the dimensions of the Ark resemble those of a real vessel.

Many 17th century scientists accepted the account of the Flood. Nicolai Steno (Latinised form of his Danish name Niels Steensen) is often considered the father of modern geology (figure 2.5). He included the biblical Flood in his work on the layers of rock (strata), which was

Figure 2.3: Artistic impression of Noah's Ark on the Flood waters.

Figure 2.4: Tablet XI of the Gilgamesh Epic with the Flood narrative, British Museum.

Figure 2.5: Portrait of Nicolas Steno as bishop.