1 Introduction

In northern Arcadia, on the dark and snowy Aroania mountain range (now Mount Helmos), there is a place that needs to be carefully avoided by shepherds. If goats get lost near the limpid, ice-cold waterfall drizzling from the 600 ft-high cliff and drink from its waters, they unavoidably die. These dangerous waters, Pausanias says, are no other than those of the Styx (8.17.8).\footnote{See descriptions in Hes. \textit{Theog.} 775 ff., Hdt. 6.74.1, Str. 8.8.4, Paus. 8.17.6–8, Ael. \textit{NA} 10.40, Apul. \textit{Met.} 6.14. For a contemporary description of the stream, see Brewster 1997, 69.}

It may seem strange to have an infernal river flow in the realm of mortals; yet the Styx is not the only one. The Acheron and the Cocytus, for instance, although they flow in the world of the dead, are also visible in different parts of the Greek world. This apparent discrepancy does not seem to cause any problem for the Greeks, nor are they bothered by reports of the existence of several Acherusian lakes in the Greek world.

This chapter aims to explore such apparent inconsistencies further by looking at what could have prompted close contacts between the realm of the dead, where infernal rivers are supposed to flow, and the world of the living, where they are reported flowing. I argue that the picture of Hades and Tartarus—which together compose the realm of the dead—as wet places crossed by streams of water emerged from the observation of a very common natural phenomenon in Greece: karstic, or subterranean rivers. A great part of Greece rests on limestone bedrock that can be weathered and carved by water.\footnote{Higgins and Higgins 1996, 13 ff.} Because of this, many Greek rivers have sections of their course underground: this means that after flowing on the surface for a while, the water dives into the ground through a natural hole called a swallow-hole or sinkhole. It continues flowing there until the river comes back up, often in the shape of a spring. I shall explore to what extent the observation of subterranean rivers by ancient Greeks con-
tributed to the elaboration of a picture of the unseen world, and in particular inspired the conception of the world of the dead as a region ringed and circumscribed by waters.

2 Empirical Observation of Subterranean Rivers in Greece

Subterranean rivers are the symptom of a wider geological setting called karst. Karst is defined as an area of limestone terrain with surface openings, blind valleys, and underground drainage channels. It is easily recognizable by the porous limestone stones that are found on the surface, the vast number of caves that are scattered over the landscape, and the presence of subterranean streams. This geological setting was widely distributed across the ancient Greek world, both in continental Greece and on the islands of Crete and in the Aegean. This geological layout is for instance found in most of the Peloponnese as well as in Corinthia, in Boeotia, in Epirus, and in Macedonia.

Due to the ubiquity of this type of terrain and its impact on water distribution, the ancient Greeks had to find strategies to deal with it appropriately. Our first evidence for a conscious interaction with the phenomenon dates from the Bronze Age. Karstic formations provoked drainage issues and regular destructive floods, and we have evidence that they caused problems for the populations living in these areas. Hence the large-scale drainage works carried out in Tiryns, Lerna, the Copais basin, Stymphalus, or the Pheneus valley demonstrate that the Bronze Age occupants of Greece had to deal with the ups and downs of living in a karstic environment, and therefore were familiar with subterranean rivers. Subsequently, Crouch argues, the Greeks had learned to master karstic landscapes so well that between the eighth and fourth centuries BCE, the colonies sent out by cities consciously sought to settle in similar rock formations. Hence they ended up in Sicily, southern Italy and southern Turkey, where such karst phenomena were significant.

In literature, we also find conscious attempts to understand the karstic phenomenon, which leaves us with important testimonies about the existence of subterranean rivers. For instance, we have reports of experiments carried

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3 Higgins and Higgins 1996, 13f.; Fouache and Quantin 1999, 50f.; Crouch 1993, 64, 67f. and Fig. 7.1.
4 Knauss 1990, 40–49. In many of these cases, the works were later attributed to Heracles; Salowey 1994 dates this process after the Dark Ages, when the memory of the Bronze Age works and the engineering technology that allowed the works to be carried out disappeared.
5 Crouch 1993, esp. 66f.