参考译文：

地下水

Groundwater is the word used to describe water that saturates the ground, filling all the available spaces. By far the most abundant type of groundwater is meteoric water; this is the groundwater that circulates as part of the water cycle. Ordinary meteoric water is water that has soaked into the ground from the surface, from precipitation (rain and snow) and from lakes and streams. There it remains, sometimes for long periods, before emerging at the surface again. At first thought it seems incredible that there can be enough space in the “solid” ground underfoot to hold all this water.

地下水是指渗入到地下并将所有岩石空隙填满的水。到现在为止，雨水是最丰富的地下水资源，是地下水在水循环中的一个环节。普通的雨水会从地表、降水以及湖泊河流侵入到地下。在冒出地表之前，这些地下水有时会长时间留在地下。在我们脚下坚实的土地中竟然有足够的空间储存这些水，这在一开始会让人觉得难以置信。

The necessary space is there, however, in many forms. The commonest spaces are those among the particles—sand grains and tiny pebbles—of loose, unconsolidated sand and gravel. Beds of this material, out of sight beneath the soil, are common. They are found wherever fast rivers carrying loads of coarse sediment once flowed. For example, as the great ice sheets that covered North America during the last ice age steadily melted away, huge volumes of water flowed from them. The water was always laden with pebbles, gravel, and sand, known as glacial outwash, that was deposited as the flow slowed down.

地下水所需的储存空间多种多样。松散的砂子和砾石间有许多颗粒和小石子，他们之间的空隙是最常见的储存地下水的空间。由这些颗粒组成的水床非常普遍，通常位于看不见的土壤下方，在湍急的河流曾经流过的地方都能找到它们的踪迹。比如，冰河时代覆盖北美的巨大冰层逐渐融化，大量水从那儿流出。水里总会携带些石子、砾石和沙石，这就是所谓的冰河期的冰水沉积，这些颗粒会随着水流的减速而沉淀。

The same thing happens to this day, though on a smaller scale, wherever a sediment-laden river or stream emerges from a mountain valley onto relatively flat land, dropping its load as the current slows: the water usually spreads out fanwise, depositing the sediment in the form of a smooth, fan-shaped slope. Sediments are also dropped where a river slows on entering a lake or the sea, the deposited sediments are on a lake floor or the seafloor at first, but will be located inland at some future date, when the sea level falls or the land rises; such beds are sometimes thousands of meters thick.

现代也有冰水沉积，尽管规模相对较小。凡是有携带泥沙的河流或者溪流从山谷流至相对平坦的地面时，砂石就随着水流速度的减慢逐渐沉淀；水流通常呈扇形扩散，它们所携带的砂石也会沉淀为光滑的扇形斜面。当河流汇入湖泊和海洋的时候也会有沉淀，这些沉淀最初在湖底或海底，但将来海平面下降或者陆地崛起时，它们就会分布于内陆，通常厚达几千米。

In lowland country almost any spot on the ground may overlie what was once the bed of a river that has since become buried by soil; if they are now below the water’s upper surface (the water table), the gravels and sands of the former riverbed, and its sandbars, will be saturated with groundwater.

低地区域上的任何位置可能就是曾经的河床，后续被土壤覆盖而变成现在的样子。如果那些河床和沙洲现在位于地下水位之下，一定会有大量的地下水浸在它们的沙砾和沙石之间。

So much for unconsolidated sediments. Consolidated (or cemented) sediments, too, contain millions of minute water-holding pores. This is because the gaps among the original grains are often not totally plugged with cementing chemicals; also, parts of the original grains may become dissolved by percolating groundwater, either while consolidation is taking place or at any time afterwards. The result is that sandstone, for example, can be as porous as the loose sand from which it was formed.

以上说的都是松散的沉积物，那些坚固的沉积物，也拥有以数万计的毛细孔来容纳水。因为最初颗粒间的缝隙通常并未完全被粘固的化学物质塞满，而且部分颗粒很可能在固化时或固化后被渗入的地下水溶解；结果这些砂岩最终变得和形成它的散沙一样多孔。

Thus a proportion of the total volume of any sediment, loose or cemented, consists of empty space. Most crystalline rocks are much more solid; a common exception is basalt, a form of solidified volcanic lava, which is sometimes full of tiny bubbles that make it very porous.

因此，不管沉积物是疏松还是坚固，他们中一定有空间。大部分结晶体岩石都非常坚硬，但也有例外，最常见的就是玄武岩，它是一种固化的火山熔岩，经常充满了微小气泡，从而变得十分多孔。

The proportion of empty space in a rock is known as its porosity. But note that porosity is not the same as permeability, which measures the ease with which water can flow through a material; this depends on the sizes of the individual cavities and the crevices linking them.

岩石的多孔性就是指其中空隙的比例。但需要注意的是，多孔性与渗透性是不同的。渗透性衡量的是水渗透物质的难易程度，它取决于与单个空隙以及连接空隙间裂缝的大小。

Much of the water in a sample of water-saturated sediment or rock will drain from it if the sample is put in a suitable dry place.█ But some will remain, clinging to all solid surfaces.█ It is held there by the force of surface tension without which water would drain instantly from any wet surface, leaving it totally dry.█ The total volume of water in the saturated sample must therefore be thought of as consisting of water that can, and water that cannot, drain away.█

当充满水分的沉淀物或者岩石样本被放置在适宜的干燥环境中时，大部分的水分会流失，但仍有部分水会继续附着在坚实的表面上。要不是因为表面张力，这些水分也会立刻蒸发，仅留下完全干燥的样本。因此，试验样本的含水量既包括可以流干的水，也包括不能流干的水。

The relative amount of these two kinds of water varies greatly from one kind of rock or sediment to another, even though their porosities may be the same. What happens depends on pore size. If the pores are large, the water in them will exist as drops too heavy for surface tension to hold, and it will drain away; but if the pores are small enough, the water in them will exist as thin films, too light to overcome the force of surface tension holding them in place; then the water will be firmly held.

这两种水的相对含量因岩石或沉积物种类不同而改变，即便它们有相同比例的空隙，还取决于空隙的大小。如果空隙很大，其中的水会形成水滴，太重足以克服吸引它的表面张力，就会流走；但如果空隙够小，水会像薄膜一样，太轻无法克服表面张力，从而稳稳地附着在空隙表面上。