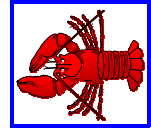


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One of the common misconceptions players who have their characters go on underwater quests is that the ocean is simply an area of coral and sand, and a few undersea cities scattered about. In actuality, the sea floor is shaped into a host of volcanic features that vary from long submarine mountain chains (which are larger than their continental equivalents) to deep trenches that are thousands of times larger than those found on land. Most land dwellers cannot even comprehend the geography of the UnderDeep. To them, the waves are a dividing line to a world filled with monsters, mystery, and madness. Little do they know that these waves harbor mountains, caverns, valleys, and plains that can put most surface features to shame.

The immense size is another thing that eludes them. On most campaign worlds, the oceans and seas teem with far more life than the land continents support, and just as many intelligent races. It goes to reason that adventures in the UnderDeep could at least parallel the grandeur of those on the surface.

Geology of the UnderDeep

In determining the geology of Fathoms, the real world features of the oceans have been merged with the fantastical elements of the imagination to create a new world for the player characters - the UnderDeep. In order to successfully capture the feel of a Fathoms campaign, the geology of the oceans must be somewhat understood by the players. This

chapter will attempt to go over some of those common geological features found in Fathoms.

Continental Shelves, Slopes, and Rises

The margins of all the continents extend seaward as a broad, flat, shallow shelf. These continental shelves dip gently seaward and are usually less than 660 feet below sea level. The shelf average width is about 43 miles, and the average depth is around 400 feet. In some places, however, the shelves can extend hundreds of miles into the sea. The continental shelves comprise only a small portion of the sea floor, but contain the largest ratio of life.

The edge of the continental shelf is marked by a steeper slope, called the continental slope. The point at which the shelf ends and the slope begins is called the shelf break. The continental slope extends from shelf break to the continental rise. The slope is only about 12 miles wide, but drops sharply to 8,200 feet in depth. The slope is often cut by submarine canyons.

The continental rise is a thick wedge of sediment which stretches from the slope to the deep sea floor, more than 13,000 feet below the surface. This sediment is carried down from the continental shelf and slope by underwater avalanches called turbidity currents. The continental rise is far less steep than the continental slope, but is still far steeper than the shelf.

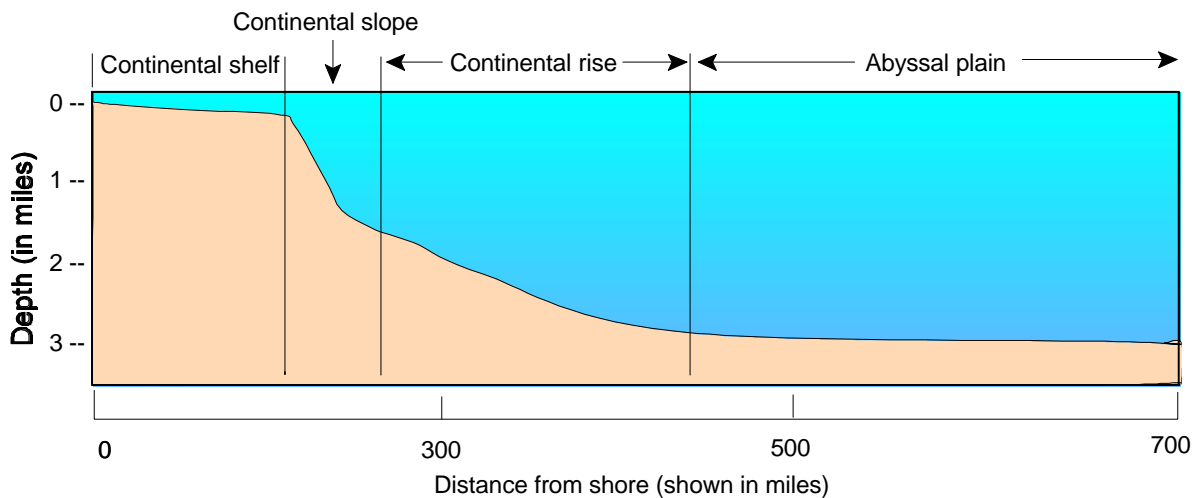
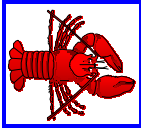
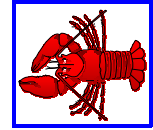


Figure 4: UnderDeep Cross-section View

(Note: vertical scale greatly exaggerated)



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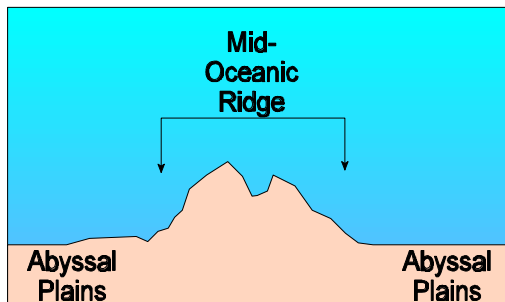


Abyssal Plains

Away from the crests of the mid-oceanic ridge system, the sea floor deepens to flat abyssal plains, which make of the largest portion of the sea floor. The depths of these plains usually remain constant, with the deepest measuring around 20,000 feet and the shallowest at about 16,000 feet. The water temperature at this level is very cold, and hovers just over freezing.

Abyssal plains are flat and featureless. Many of the hills and hollows that once covered the sea floor have been buried long ago under a thick layer of sediment that carpets the plains. This sediment takes millions of years to accumulate, growing at a rate of only ½ inch every thousand years. The sediment contains the remains of countless millions of tiny plants and animals, forming something called deep-sea ooze. This ooze consisting of more than 30 percent skeletal organic remains, primarily from plants and animals living in the surface waters of the oceans. When the organisms die, their skeletons sink and ultimately become part of the sediment below. Deep-sea oozes cover approximately 45 percent of the sea floor.

Deep sea ooze is the birthplace of the abyssal horror, an undead like creature created from the lifeforces of the organic marine sediment.



Mid-Oceanic Ridges

Long submarine mountain chains, called mid-oceanic ridges, are found branching in practically all major ocean basins. These ridges are typically up to two miles wide and rise one to two miles above the sea floor. Some small segments of these chains actually rise above sea level to form islands. Most of the ridge crests, however, rise only to a height of

over a mile below the ocean's surface.

The mid-oceanic ridge is formed where the continental plates meet. It is deeply submerged almost everywhere, but there are occasionally areas where the ridge extends out of the water and runs along a land mass. Usually, these areas are hot spots, where enormous volumes of magma have poured out from the Earth's mantle.

Oceanic Trenches

In selected areas, usually at the margins of the ocean basins, the abyssal plains descend into steep trenches, where the greatest depths in the oceans are found. They occur at the edges of two oceanic plates, or an oceanic and a continental plate, where one plate melts back into the earth by a process called subduction. When the two plates collide, one plate is forced beneath the other.

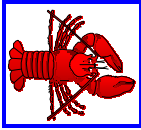
The trenches are long and narrow V-shaped seabed valleys. They can reach depths of 26,000 to 32,000 feet below sea level, and 6,500 to 13,000 feet below the sea floor. Volcanic activity and earthquakes are common in oceanic trenches because of the moving crust.

Few living things can survive the crushing pressure, darkness, and freezing water of the trenches, and include sea cucumbers, anemones, crustaceans, and some mollusks. The feared eye of the deep and abyssal horror are also found in these trenches. Tritons often have communities in these trenches.

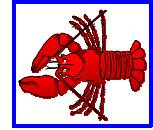
Hydrothermal Vents

Hot, mineral rich water sometimes shoots up from cracks in the seabed, forming hydrothermal vents. While the deep sea is usually deserted and cold, the areas around these hot and rich with life. These vents can cause the water around it to reach temperatures of more than 572° F. Sulphur dissolves in the water, is heated up by the rocks in the crust below, and gushes up. This mixture is poisonous to most creatures, but clumps of bacteria use it for nourishment. These bacteria, in turn, are used as food by other creatures such as tube worms, clams, crustaceans, and some fish.

As the hot water shoots up, it deposits sulfur and other minerals on the sides of the vents. This builds up chimneys up to 33 feet tall. The water coming out of these chimneys is black, giving them the name "black smokers." Anyone caught in the stream of these smokers takes 2d6 points of damage each



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round until they leave the area.

Coral Reefs

Coral reefs are like underwater tropical rain forests or gardens, full of color and life. Nearly one third of all the worlds fish live in coral reefs. Coral reefs can cover thousands of square miles, and are found in the waters along the coastlines.

Coral reefs can only grow in warm, shallow waters where there are plenty of sunshine and algae for food. Coral is made from tiny creatures called polyps, and grows very slowly. It takes about 20 years for a colony the size of a basketball to grow. These reefs are not only rich with fish and other marine animals, but they often house large communities of aquatic races. Sea elves, quirden, and others build homes in the coral. Every nook and cranny in a coral reef is a hiding place or shelter for animals.

Reefs which form around the base of an island are called atolls. As the sea level rises, the original island sinks, while the coral still grows. The end result is only a circular or horseshoe shaped coral reef protruding in the water.

Volcanic Islands

Thousands of volcanoes grow on the seafloor. Many of them reach heights that would dwarf the largest volcanoes on land. In some places, these volcanoes grow so high that they break the surface of the water, forming volcanic islands. The constantly moving continental plates cause these volcanoes to form.

Volcanoes that break the surface of the water can grow quickly. Within days, a volcanic island can be thousands of feet wide and hundreds of feet high. After the volcano stops erupting, life takes hold quickly on these islands, and within a year it is common to find plants, birds, and insects living on these islands.

Quirden celebrate the birth of a new volcanic island. This celebration can stretch on for days or even weeks. The quirden often use islands as places for festivals and celebrations, so they are always excited at the creation of a new “playground.”

Elemental Portals

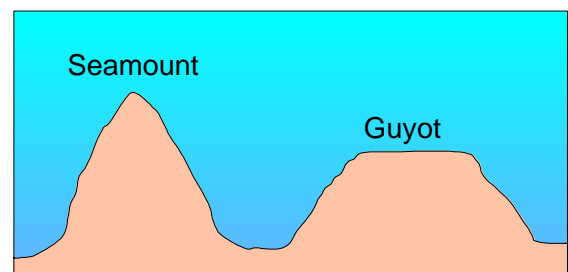
When a portal or vortice to another elemental plane is open on the surface, it usually has little effect until someone or something goes through the portal. At the time, the poral temporarily opens up,

and one may even catch a glimpse of what is on the other side. However, when a portal to an elemental plane exists underwater, the effects can be dramatically different. The surrounding water constantly tries to flow through the portal, keeping it in a constant state of being partially opened. The result is that the two elements mix together, forming unusual - and sometimes dangerous, results.

A portal to the Elemental Plane of Air which is set underwater will often form a pocket of air, or at the least, create the effect of an *airy water* spell around the opening. When the portal is to the Elemental Plane of Fire, it may produce the appearance of volcanic activity, or even a jet of flame that shoots out into the water before being doused. Portals to the place of Ash form a thick sludge, and the list goes on. It is up to the DM to determine what effects a portal to one of these elements may cause. Due to the unpredictable nature of the planes, two portals to the same elemental plane may even product two entirely different results.

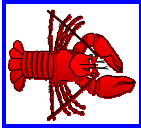
Fracture Zones

Long, narrow cracks on the sea floor previous caused by the movement of continental plates are called fracture zones. They usually run laterally to the mid-oceanic ridges. The fracture zones are characterized by ridges and valleys separated by steep rock cliffs that are hundreds to several thousands feet high. These fracture zones can be traced out into the abyssal plains, where the traces of the cliffs are lost beneath the sediment.

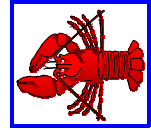


Seamounts and Guyots

The abyssal plains are also dotted with numerous isolated mountains called seamounts. Their peaks rise more than 3,000 feet above the seabed, but do not often break the surface. Those that extend above sea level are islands. Some seamounts can even reach more than 13,000 feet



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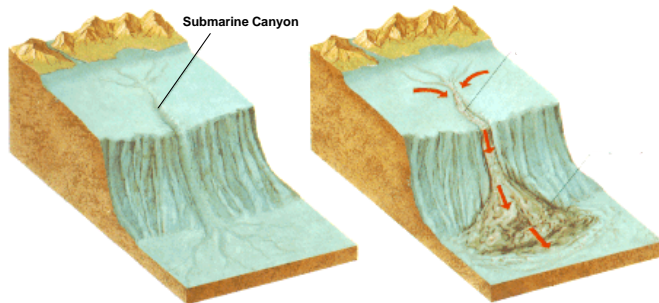
high. Those with elevations less than 3,000 feet are termed seahills or seaknolls. A seapeak is a seamount with a pointed summit. Most seamounts are cone shaped, often with steeply sloping sides. Although many seamounts rise sporadically across the ocean floor, most are found in linear chains.

Guyots are similar to seamounts, and are the sunken remains of ancient islands whose tops have been flattened by the erosive action of the waves. They are often found in large clusters. The tops of most guyots are more than 3,000 feet below the surface of the sea. The tops of guyots can be as large as 11 miles in diameter.

In comparison with the surrounding deep sea floor, the upper parts of seamounts and guyots are teeming with life. This is because they are shallower and receive more food from the surface waters. Many marine creatures use the tops of seamounts and guyots as feeding places. They are often used by aquatic races as locations for communities, or even cities.

Submarine Canyon

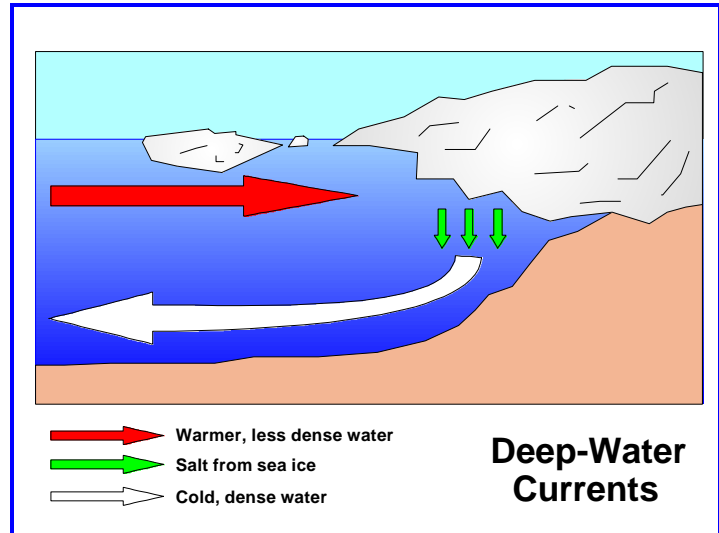
Submarine canyons are deep, V-shaped valleys that lie underwater off all of the Earth's continental



margins. Some canyons begin as gorges within estuaries of large rivers, and a few are in line with rivers but discontinuous with the shoreline. Submarine canyons generally make excellent fishing grounds for surface dwellers.

Submarine canyons can reach more than 3,200 feet deep, and can act as passageways for loads of sediment to flow down the continental slope and into the deep sea. Deep sea fans form at the bottom of submarine canyons, where a turbidity current

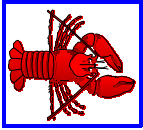
deposits its load of sediment. This sediment spreads out in a fan shape on the flat sea floor.



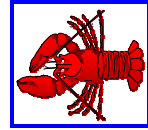
Currents

Although nearly imperceptible to a surface dweller, the ocean is full of currents that flow on both above and below its surface. The surface currents are swept along by the wind in huge belts that can be as wide as 50 miles. Some of these currents flow at speeds of 136 miles per day. The skilled sailor has learned where these currents are, and use them to their advantage on voyages. Depending on the heat of the air that drives it, surface currents can be as warm as 86° F or as cold as 30° F. It is not uncommon for sailors in arctic regions to suddenly find themselves surrounded by warm water. These "rivers of the sea" have relatively predictable and unchanged paths, usually flowing along coastal regions. The warm air drives the current toward the colder arctic regions, then as the air cools, it is driven back toward the warmer areas in an endless cycle.

The other type of current is called a deep-water flow. These currents are set in motion by differences in the density of seawater. Under the ice flows in the arctic regions, the cold water is weighted down with salt, which has drained into it from the ice. This water sinks into the deep sea as the warmer, less



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dense water flows to replace it at the surface. This type of ocean circulation is called *thermohaline*. The waters in these currents move at the slow pace of only a few yards per day, but these currents are as perceivable to the UnderDeep residents as a gentle summer breeze is to a human.

Creating an UnderDeep Campaign

Whether using a TSR published gaming world or one of your own creation, any AD&D world with large bodies of water can have an aquatic campaign exist within them. The campaign may lie in the Trackless Sea of Toril, the Azure Sea of Oerth, or the Blood Sea of Istar. Campaigns can even be set on entirely oceanic worlds, covered entirely with water.

An advantage of integrating a Fathoms campaign into an existing world is that the history of the surface world, and even the geography, has already been created. All the DM has to do is design what lies beneath the waves. A Fathoms campaign does not need to interfere with surface world campaigns, as the races of the two "worlds" rarely have contact, and their societies evolve almost completely independent of each other.

While most of the geographical features discussed in this chapter are real world features found in our own earth, an UnderDeep campaign does not have to be this way. Because the AD&D game is based on fantasy, the ocean floor can contain any number of fantastical features that have magical, planar, or other exotic natures. For instance, perhaps the continents float on the surface of the water, rather than rising from the ocean floor. The campaign world may be flat, and an endless supply of water tumbles over the edges like a waterfall. The oceans may be very shallow, not more than a few hundred feet deep in most locations, allowing all races to live anywhere without concern for depth. The point is, when creating your own Fathoms campaign, feel free to be creative and break the rules of science and nature.

Cities in the UnderDeep

Many of the aquatic races live simple, nomadic lives, making their homes in coral caves or simply sleeping in beds of sand or seaweed. The sea allows these races much more freedom than the surfaces allows humans, and many schools of merfolk, aquatic elves, and such take advantage of this freedom. Quite a few people, especially sea goblins, are very satisfied making their home in sunken ships.

There are however, many cities build under the

ocean as well. These cities are usually built from rock, and decorated with shells, coral, and other items. Some races have actually been able to manipulate coral and build entire homes from it.

One thing common with most undersea cities is their magnificence. While most buildings on the surface are built from wood, which falls into decay over time, UnderDeep structures are more often comprised of marble, granite, or a similar type of stone. As a result, these structures can last for thousands of years, and are handed down the generations.

Another feature very common in aquatic cities are air pockets. Whether natural or magically created, areas of air are very useful to UnderDeep races. All alchemy, metalworking, and similar jobs require air. Some creatures such as tritons and aquatic elves who are comfortable out of the water keep huge air pockets around simply for a change. It is not unusual to find entire sections of a city in air bubbles or domes. Some of these undersea cities commonly have visitors from the surface for trading, and it is useful to keep these air filled sections open for them as well.

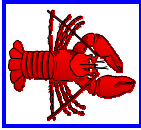
Most aquatic cities contain a mixture of races who live together in relative harmony, while some nomadic schools often do not desire other races to live with them. In order to allow any race to live within the city without regard to light, temperature, or depth, UnderDeep cities are usually in shallower areas. This includes places such as the continental margin, or higher elevation points in the ocean, such as gullots.

The Elemental Plane of Water Campaign

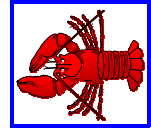
The most likely place for a Fathoms campaign is in an ocean of a Prime Material world. This allows all the features described in this chapter, and allows us to use our knowledge of oceans when creating the details of the setting. But another place that can just as easily house a Fathoms campaign is the Elemental Plane of Water.

While there are many similarities to a prime world campaign, there are just as many differences. Since there are other TSR® products that discuss the elemental plane of water, it will be just briefly mentioned here.

One difference in the elemental water plane is the type of life found there. Since there is no surface with air, no mammals such as dolphins and whales live in this plane. And while they exist there, races such as quirden and sea elves, which like to visit the surface often, are not as common in this plane. Triton and Hai



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Nu, however, are found in much greater numbers.

There are many difficulties of a prime world that creatures in the elemental plane of water can ignore. One of these is depth. The water pressure throughout this plane is uniform no matter which direction you go, which is equal to about three atmospheres, or the same as being 65 feet deep in the water. Light is also something that creatures in this plane have little concern for. The very plane itself glows a bluish-green light, never growing dark throughout the plane. This provides the same light as bright sunlight would at about 65 feet deep in a prime material world ocean.

Another strange effect of the elemental plane of water is the direction of up and down - there is none! There is no natural gravity in the elemental plane of water. Floating material such as islands of rock simply remain in their relative place in the plane. They never sink or rise, although there are aquatic currents that can move them along slowly.

Individuals with animal and higher intelligence can choose to have gravity, and the direction of up and down is relative to their minds. That is, the creature "chooses" which direction is up and down, and they fall or rise accordingly. The gravity is unique to the individual. This occurs even if two creatures are right next to each other. If they both choose different directions as "down", they will fall opposite ways. While very confusing to visitors, races who live in the elemental plane of water have learned to use this effect to their advantage when traveling.

The gravity for a large rock or structure works differently. Ships, floating cities, and large natural

bodies such as rock and ice have their own gravity plane, identical to that of a large object in Wildspace (see the Spelljammers™ campaign setting for more details). For those who do not own the Spelljammers campaign setting, this effect is briefly described below.

Each object weighing a few tons or more generates its own gravity field. In very large objects, such as a mountain of rock floating through the water, the gravity is focused at the center. This would allow an individual to walk completely around the mountain, similar to how one could walk around a planet. On smaller objects, the gravity is a plane that runs across the center (See Figure ?).

Once an individual crosses that plane, the gravitational forces reverse to the other side. When a character approaches to a close distance of one of these items which generates its own gravity, they no longer have the option to choose their own up or down, but must obey the laws of gravity for the object.

The Elemental Plane of Water is littered with elemental pockets. These are materials of various elements which have broken off from their own elemental plane and now drift through the plane of water. Examples are mountains of earth, pockets of air (similar to the *airy water* spell), masses of magma, etc.

The masses of earth are often home to aquatic cities of triton, sauhagin, and other creatures.

For more details on the Elemental Plane of Water, see the Planescape™ campaign setting, the *Manual of the Planes*, and other related TSR® products.

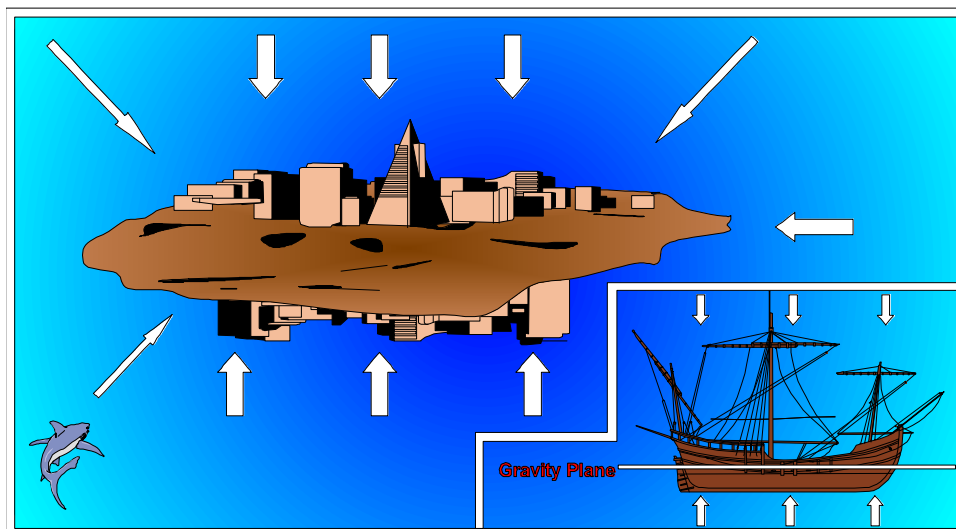


Figure 10: Gravity Effects in the Elemental Plane of Water