

The Design in Water

H A R U N Y A H Y A

Most of our planet is covered with water. Oceans and seas make up three fourths of the earth's surface while the land itself contains countless numbers of rivers and lakes. The snow and ice on the summits of lofty mountains is water in its frozen form. A substantial part of the earth's water is in the sky: every cloud contains thousands--sometimes millions--of tons of water in the form of vapor. From time to time, some of this water vapor turns into drops of liquid and falls to the ground: in other words, it rains. Even the air you're breathing now contains a certain amount of water vapor.

In short, no matter where you may look on the surface of the earth, you're certain to see water around somewhere. Indeed, the place you're sitting in at this moment probably contains about forty to fifty liters of water in it. Look around. You can't see it? Look again, more carefully, this time raising your eyes from these words and look at your hands, arms, legs, and body. That 40-50 liter mass of water is you!

It's you because about 70% of the human body is water. **Your body's cells contain many things but nothing so much or so important as water.** The biggest part of the blood that circulates everywhere in your body is of course water. This is true not just of yourself or of other people however: the bulk of the bodies of all living things is water. Without water it seems, life is impossible.

Water is a substance that was specially designed so as to be the basis of life. Each and every one of its physical and chemical properties was specially created for life.

Other liquids freeze from the bottom up; water freezes from the top down. This is one of the most unusual properties of water and it is crucial for the existence of water on the surface of the earth. Were it not for this property, that is, if ice didn't float, much of our planet's water would be locked up in ice and life would be impossible in its seas, lakes, ponds, and rivers.

Let's examine this in detail to see why. There are many places in the world where the temperature falls below 0°C in winter, often considerably below that. Such cold will of course affect the water in seas, lakes, etc. These bodies of water grow colder and colder and parts of them begin to freeze. If ice didn't behave the way it does (if it didn't float in other words) this ice would sink to the bottom while the warmer bits of water would rise to the surface and be exposed to the air. But the temperature of that air is still below freezing so these will freeze too and sink to the bottom. This process would continue until there was no liquid water left at all. But this isn't what happens. What happens instead is this: As it gets colder, water grows heavier until it reaches 4°C at which point everything suddenly changes. After this, the water begins to expand and it becomes lighter as the temperature drops. As a result, the 4°C water remains on the bottom, the 3°C water above it, the 2°C water above that and so on. Only at the surface does the temperature of the water actually reach 0°C and there it freezes. But only the surface has frozen: **the 4°C layer of water beneath the ice remains liquid and that is enough for underwater creatures and plants to continue to live.**

We should note here that another property of water--the low thermal conductivity of ice and snow--is also crucial in this process. Because they are such poor conductors of heat, the layers of ice and snow keep the heat in the water below from escaping into the atmosphere. As a result of all this, even if the air temperature falls to -50°C, the layer of sea ice will never be more than a meter or two thick and there will be many fractures in it. Creatures such as seals and penguins that dwell in polar regions can take advantage of this to reach the water beneath the ice.

Again let us recall what would happen if water didn't behave this way and acted "normally" instead. Suppose water continued to become denser the lower its temperature became like all other liquids and ice sank to the bottom. What then?

Well in that case, the freezing process in the oceans and seas would start from the bottom and continue all the way to the top because there would be no layer of ice on the surface to prevent the remaining heat from escaping. In other words, most of earth's lakes, seas, and oceans would become solid ice with a layer of water perhaps a few meters deep on top of it. Even when the air temperature increased, the ice at the bottom would never melt completely. In the seas of such a world, no life could exist and in an ecological system with dead seas, life on land would also be impossible. In other words, if water didn't "misbehave" and acted normally, our planet would be a

dead world.

Why doesn't water act normally? Why does it suddenly begin to expand at 4°C after having contracted the way it should?

That is a question that nobody has ever been able to answer.

Water is "just right" for life to a degree that cannot be compared with any other liquid. The larger part of this planet, a world whose other attributes (temperature, light, electromagnetic spectrum, atmosphere, surface, etc) are all suitable for life, has been filled with just the right amount of water necessary for life. It should be obvious that this cannot all be accidental and that there must instead be intentional design.

To put it another way, all the physical and chemical properties of water show us that it is created especially for life. **The earth, purposefully created for mankind to live in, was brought to life with this water that was specially created to form the basis of human life.** In water, God has given us life and with it He causes the food by which we are nourished to spring from the soil.

But the most important aspect of all this is that this truth, which has been discovered by modern science, was revealed in the Qur'an, bestowed upon humanity as a guide fourteen centuries ago. Concerning water and mankind, God's word is revealed in the Qur'an thus:

It is He who sends down water from the sky. From it you drink and from it come the shrubs among which you graze your herds. And by it He makes crops grow for you and olives and dates and grapes and fruit of every kind. There is certainly a Sign in that for people who reflect. (Surat an-Nahl: 10-11)