



Ohr Yerushalayim News

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T NEWS ... LATEST NEWS ... LATEST

מזל טוב

Mazel Tov to Rabbi & Mrs Johnny Goodman on the birth of a son. The Sholom Zochor takes place at 1 Arlington Avenue, Prestwich.

Mazel Tov to Mr & Mrs Avi Stern on the Bar Mitzva this Shabbos of their son Zvi. Mazel Tov also to grandparents, Mr & Mrs Michael Brandeis. The Kehilla is invited to a Kiddush after Davenning at their home, 40 Singleton Road.

Mazel Tov to Mr & Mrs Yoel Ross on the birth of their daughter, Soroh Bayla.

Kiddush This Shabbos

Mr & Mrs A Rodrigues-Pereira invite the Kehilla to Kiddush to mark the birthdays of their daughters Nomi Gila and Bayla Rifka from 11.30am at their home, 15 Mayfield Road, Salford.

Guest Shiur

Rabbi Dovid Kaplan will be speaking Monday night 9.50pm on the subject of 'Our 3 weeks v theirs'. The late Maariv Minyan follows the Shiur at 10.45pm.

Rosh Chodesh Group

What a great success the Rosh Chodesh group was! Boruch Hashem there was a record number of attendance of around 25 girls. We all enjoyed a fantastic lunch of bagels with a choice of spreads and cream cakes to top it off. After lunch we all had a great time sculpting balloons into dogs and other different ideas led expertly by Mr Mark Jacobson who kindly gave of his time to entertain us. Thank you.



T NEWS ... LATEST NEWS ... LATEST

Still Waters Run Deep

Dani Epstein

The season of Pirkei Ovos is upon us again, and in the 5th perek we read of a rather breathtaking claim: - דַּכְלָא בָּהּ, וְהַפָּךְ בָּהּ, וְהַפָּךְ בָּהּ וְהַפָּךְ בָּהּ. Ben Bag Bag says: Delve and delve into it, for all is in it.

Someone reading this statement for the first time might be a little sceptical and say: "Oh really?" To which I would reply: "Really. Check this out."

On the 13th of June 2014 a group of scientists including geophysicist Steven Jacobsen published an article in Science in which they rather drily describe their research as "Dehydration melting at the top of the lower mantle". To 99.97% of the world's population, this paper has

absolutely no relevance at all. For us, though, it represents the basic pshat of a possuk in parshas Noach.

We are all familiar with the story of Noach, and we are not alone in this. The spread of Christianity and Islam has meant that the overwhelming majority of the world are familiar with the basic storyline. What is even stranger is that almost every culture – even many that have died out – have a "great flood myth", i.e. a story of a deluge in ancient times.

Naturally, many of these stories vary wildly and all manner of strange characters are featured (one begins to wonder what their authors were smoking), but despite this, most of them feature the basic elements of a small group of individuals who survive a flood that kills the rest of humanity.

Interesting as all this is, the very last thing I would presume to do would be to claim legitimacy for the Torah's account just because some witchdoctor in Tahiti tells a similar story under the influence of what are, in this country, restricted substances.

In fact, I am not all that keen on using any external evidence – even science – to verify the Torah; the Torah requires no verification, unlike scientific research which jolly well does. Frequently, though, science does help us understand the Torah.

There is a straightforward account of the start of the flood:

בְּשָׁנָת שֵׁשׁ מֵאוֹת שָׁנָה לְחַיֵּי נֹחַ בַּחֹדֶשׁ הַשֵּׁנִי בְּשִׁבְעָה עָשָׂר יוֹם לַחֹדֶשׁ בַּיּוֹם הַזֶּה נִבְקָעוּ כָּל מַעְיְנוֹת תְּהוֹמוֹ רֶבֶה וְאַרְבַּת הַשָּׁמַיִם נִפְתְּחוּ:

"In the six-hundredth year of the life of Noach, in the second month on the seventeenth day of the month, on this day were split all the springs of the great deep and the skylights of the heavens were opened."

By and large this makes for a simple read. There are, however, quite a few things going on in this possuk, but let's deal with just one of them.

Two sources of water are described, the "springs of the great deep" and the "skylights of the heavens". The springs were "split" open to release their waters, whereas the "skylights" were simply "opened". Regarding their opening, the Torah could have simply written:

The Week Ahead

פרשת בלק	
Mincha	7.30pm
Candle Lighting	7.55 - 8.00pm
Seder HaLimud	8.40am
סוף זמן ק"ש	9.00am
Shacharis	9.00am
Mincha	2.00pm / 6.00pm / 9.50pm
Rov's Mishnayos Shiur	following
Motzei Shabbos	10.55pm
Sunday	7.15am / 8.20am
Monday / Thursday	6.45am / 7.10am
Tuesday / Wednesday / Friday	6.45am / 7.20am
Mincha & Maariv	7.45pm
Late Maariv	10.45pm
Mincha & Maariv Next Shabbos	7.30pm

בַּיּוֹם הַזֶּה כָּל מַעְיָנוֹת תְּהוֹם רַבָּה וְאַרְבֹּת שָׁמַיִם נִפְתְּחוּ
...“on that day all the springs of the deep and the skylights of the heavens were opened”.

Admittedly this only saves one word, but brevity in the Torah is inherent and imperative. If we find an extra letter, there is a reason for it; how much more so an entire word!

It is quite obvious that the Torah is indicating that the “springs of the deep” and the “skylights of the heaven” were opened in two different ways. After all, the springs were “split” whilst the skylights merely “opened”.

One could simply dismiss them as being essentially the same idea, and move on. Recent research, however, gives us a really simple-to-understand explanation that makes reading this possuk very straightforward and self-explanatory.

First of all, where exactly were these waters “of the great deep”? Why are they described as being from the “great deep”? Surely this implies that there are waters in some sort of a “deep” that is not “great”. Are these waters of the “great deep” something other than the seas, or merely the deeper parts of the sea like the Marianas Trench? If it's something like the latter, how did they open up in any fashion at all, since they were there already? If the springs were “split”, then surely that would imply that the water they released were sequestered elsewhere, and not in the seas?

Well, there actually is a prior reference to waters of the “deep” in the second possuk of the Torah:

וְהָאָרֶץ הָיְתָה תְהוֹ וְבָהּ וְחֹשֶׁךְ עַל פְּנֵי תְהוֹם וְרוּחַ אֱלֹהִים מְרַחֶפֶת עַל פְּנֵי הַמַּיִם
...“and Earth was astonishingly empty, and dark on the face of the deep, and the spirit of Elokim was hovering upon the face of the water”

So there is a clear differentiation between waters that are merely deep - תְהוֹם and those of the “great deep” – תְהוֹם רַבָּה which are an entirely different category. Exactly where the waters of the “great deep” exist is not specified, but clearly they must be elsewhere than on the surface of Earth.

This provides two vital pieces of information that are the key to understanding this possuk. The first is that there are waters that are deeper than those that were the first stages of Earth's existence, which eventually became the seas, and the second piece of information is that releasing these waters involves “splitting” as opposed to “opening”; essentially these waters of the great deep are released in a quite different manner than those of the heavens. There is no point in arguing exactly what “opening” implies in context to the heavens, and consequently debating the niceties of what “splitting” can imply is pointless at this stage. What's important is simply to differentiate between the two waters, in that they were both released as a deluge in two quite different ways.

In 1879 a meteorite slammed into the ground in a remote area of Australia near the Tenham station, South Gregory, in western Queensland. A great deal of scientific knowledge was gleaned from that lump of alien rock; amongst those discoveries, in 1969, the mineral Ringwoodite was first identified from it. Ringwoodite is notable for being able to contain water within its structure, present not as a liquid but as hydroxide ions (oxygen and hydrogen atoms bound together).

Recently Graham Pearson, a geologist at the University of Alberta, discovered a diamond containing a minute amount of ringwoodite. This was quite an exciting find, since diamonds are formed deep underground, hundreds of miles beneath the surface, and finding ringwoodite buried inside one implies that the latter mineral forms or exists at great depth. This particular sample of ringwoodite contained an infinitesimal amount of water which was an even more exciting discovery. There could be water in the mantle's transition zone or deeper, at around 410-660km beneath the earth's surface. The tiny amount of ringwoodite and even smaller amount of water it contained, however, didn't really tell much of a story.

Steven Jacobsen – the geophysicist whose paper was mentioned at

the beginning of this article – took this research one step further. Using 2000 seismometers, he and his colleagues recorded and analysed the seismic waves generated by over 500 earthquakes. These waves propagate through the planet and “they make the Earth ring like a bell for days afterwards,” says Jacobsen.

The team was able to figure out which types of rocks the waves were passing through by measuring the speed of the waves at different depths. In order to determine how ringwoodite would affect these waves, Jacobsen grew a sample of the mineral in his lab and exposed it to the sort of extreme pressures one would find in the transition layer. In this way he was able to determine how ringwoodite, if present, would affect the waves.

Combining the results from that experiment and the analysis of the seismic waves, he discovered that below the United States there is a vast layer of ringwoodite that not only has trapped water, but that the intense pressures at that depth are squeezing water out of the mineral. “It's rock with water along the boundaries between the grains, almost as if they're sweating,” says Jacobsen.

According to him, there is a very good chance that there is a layer of ringwoodite that wraps around the entire planet at these depths, a vast reserve of water three times the volume of all the seas combined.

“We should be grateful for this deep reservoir,” says Jacobsen. “If it wasn't there, it would be on the surface of the Earth, and mountain tops would be the only land poking out.”

At this point it's perfectly obvious why the Torah refers to “splitting the springs of the great deep”. This water lies some 600 kilometres under the surface – that certainly qualifies for the phrase “great deep”.

This water requires tremendous pressure to extract. Words like “fracking” had not yet been invented, so I suppose the closest one get can to “immense pressure” in Loshon Hakodesh is “splitting”.

So here you have enough water to almost entirely flood the earth, that is buried in the great deep that is split in order to release it.

Nice, easy-to-understand pshat, courtesy of 21st century research.

Ohr Yerushalayim
invites you to a **Shiur**
from a **guest speaker**

Guest Speaker

 **Rabbi Dovid Kaplan שליט"א**

Our Three Weeks vs. Theirs

on Monday 7th July at 9.50pm followed by Maariv at 10.45pm

All welcome