

Curriculum Vitae - Yoav Ben Dor

Short Biography

I matriculated Misgav regional high school, majoring in biology and Arabic, and volunteered for two months as a counsellor in Cider Lake Camp, Milford, PA, USA. I then travelled through South America for another 10 months, where I was fascinated by its breathtaking landscapes, and decided to pursue a career in Earth Sciences. I began with a B.Sc. in the Hebrew University of Jerusalem, which I completed with great honor in 2013, and continued to M.Sc. studies (with a thesis), which I completed with highest honor in 2015. In December 2015, I started my Ph.D. studies in the interdisciplinary program of hydrology and water resources, where I focus on the reconstruction of hydrologic and climatic variability of the Dead Sea watershed during episodes of global climate change. As part of my research, I combine methods from various fields, including petrography, geochemistry, and statistics and modelling. Since 2013, I have also been teaching mineralogy, sedimentary petrography and hydrology. I volunteered as a tutor of students with learning disabilities for several years, and serve as the captain of the Hebrew University orienteering club, which I founded with the students' union and the Cosell association for physical education. As of 2018, I also guide and counsel high-school students conducting a research project (Avodat Gemer) in the faculty of mathematics and science as part of their high-school matriculation. In 2020 I initiated a series of books on Earth sciences together with my wife, and our first book, "The Rock Cycle for Toddlers" is available online.



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האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM



Academic Education

2015-present Ph.D. in Hydrology and Environmental Science

The Hebrew University of Jerusalem

Thesis subject: Seasonal to centennial hydro-meteorological variability during late Pleistocene climate changes in the Levant from deep Dead Sea sediments

<https://www.nature.com/articles/s41598-018-25969-6>

Abstract: Studying the high-resolution hydrological record of deposits from the Dead Sea basin in order to improve our understanding of local hydro-climatic processes during global climatic changes in the seam of global climate belts, as analogs to future climate changes. This study is set to disentangle changes in the frequency of extreme hydrometeorological events and mean climate variability, which control vegetation, water availability and average precipitation, and has great implications on the densely populated sub-tropical regions of the earth.

2013-2015 M.Sc. in Geology (cum laude with GPA 98)

The Hebrew University of Jerusalem

Thesis subject: The Provenance of the fine fraction of the Cambrian siliciclastic sequence of Israel

[http://www.gsi.gov.il/uploads/ftp/GsiReport/2015/BenDor-\(Yoav\)-GSI-17-2015-with_cover.pdf](http://www.gsi.gov.il/uploads/ftp/GsiReport/2015/BenDor-(Yoav)-GSI-17-2015-with_cover.pdf)

Research Abstract: The Cambrian sequence of the siliciclastic sequence of north Gondwana comprise a major constituent of regional reservoirs of resources, such as water aquifers, minerals and metals of commercial value, as well as oil and gas. Their pivotal stratigraphic location in the bottom of the Israeli-Levantine stratigraphic column suggests that these sediments have had a key role in later geological and sedimentary processes that took place in the Mediterranean basin and its surroundings. The application of combined mineralogical and multi-proxy isotopic analyses revealed the signature of remote sediment sources, and helps in clarifying palaeoclimatological, palaeogeographical and tectonics that resulted in the deposition of this voluminous siliciclastic sequence.

I was on the Dean's List for academic accomplishments in the years 2014 and 2015, and was awarded the Rector's prize during 2015.



2010-2013 B.Sc. in Earth Sciences (cum laude with GPA 94.4)

The Hebrew University of Jerusalem

I was on the Dean's List for academic accomplishments in the years 2011 and 2013.

Additional Education

2013-2016 Practical Engineer in Landscape Architecture (cum laude with GPA 94)

Ort Olieski College of Art and Technology, Jerusalem.

Work Experience

2013-today Teaching Assistant | Hebrew University of Jerusalem

I have been working as a T.A. since the beginning of my M.Sc. studies. I mostly taught classes that involve the application of microscopy based techniques for the analyses of sediments and sedimentary rocks, as well as introduction to hydrology and the modelling and analysis of environmental systems.

2010-2013 Research Assistant | Geological Survey of Israel

I worked in the department of geochemistry and environmental geology, and carried multiple types of analyses on various materials. I focused on analytical procedures, which involved dissolution, elemental and isotopic preparation and measurements. In addition, I also participated in numerous occasions in fieldwork and operated the scanning electron microscope.

Scholarships and Awards

2020 (Ph.D.) – The [Peretz Grader award](#) of the Israeli Geological Society for an excellent publication.

2019 (Ph.D.) – The Menachem Shraga & Theodor Dicker award for excellent research students in earth sciences.

2018 (Ph.D.) – The Rieger Foundation Award for excellent Ph.D. students in the fields of environmental science.

2016, 2017 (Ph.D.) – The Advanced School of Environmental Studies scholarship for excellent Ph.D. students.

2014, 2015 (M.Sc.) – Moscona Fellowship for excellent M.Sc. students. Dean's prize, Rector's prize.

2011, 2013 (B.Sc.) – Dean's prize for excellence in academic studies



International Training

2016

August-November - visiting scientist in section 5.2, GeoForschungZentrum (GFZ), Germany.

IAS 2016 international Summer School of Sedimentology, Italy

International Continental Drilling Project (ICDP) annual training course, Germany

PALEX 2016 Summer School (joint with GeoForschungZentrum and Al-Quds University), Austria and Germany

Volunteering

2018-today Tutor and team counselor | Research program in the sciences

As part of the Alpha research program in sciences (A part of the Future Scientists Center) I have been tutoring two high-school students who conducted a research project at our laboratory towards majoring in chemistry (Avodat Gemer). In addition, I am counseling a group of 14 students conducting a research project towards matriculation in several departments of the faculty of mathematics and science of the Hebrew University.

2013-today Captain | Hebrew University Orienteering Club

Three years ago, I established the Hebrew University orienteering club in a joint effort with the students' union and the Cosell association for physical education. The Club provides HU students a ready platform for participating in an interesting and challenging sport with a communal atmosphere.

<http://nivuthuji.wixsite.com/nivuthuji>

2013-2016 Tutor | Perach Tutorial Project/Hebrew University

I have been tutoring students with learning disabilities and students of the periphery of Israel. I find it to be an important act in promoting equal chances for students that start their academic studies with inherited drawbacks, due to learning disabilities or education of lesser quality, that wish to pursue academic studies. As a grandson of a hardworking factory worker, I believe that social mobility and free access to high education are of high importance, and have great implications on our society and the future of our country.

Publications

Published peer reviewed papers

Ben Dor Y., Flax T., Levitan I., Enzel Y., Brauer A., Erel Y. (submitted). Experimental investigation of the paleohydrological implications of aragonite precipitation in the endorheic Dead Sea and its precursors.

Ben Dor Y., Neugebauer I., Enzel Y., Schwab M.J., Tjallingii R., Erel Y. and Brauer A. (2019). Reply to comment on Ben Dor Y. et al. "Varves of the Dead Sea sedimentary record." *Quaternary Science Reviews* 215 (2019): 173–184. *Quaternary Science Reviews*.

Ben Dor Y., Neugebauer I., Enzel Y., Schwab M.J., Tjallingii R., Erel Y. and Brauer A. (2019). Varves of the Dead Sea sedimentary record. *Quaternary Science Reviews*.

Ben Dor Y., Armon M., Ahlborn M., Morin E., Erel Y., Brauer A., Schwab M.J., and Enzel Y. (2018). Changing flood frequencies under opposing late Pleistocene eastern Mediterranean climates. *Scientific reports*.

Quade J., Dente E., Armon M., **Ben Dor, Y.**, Morin E., Adam O. and Enzel Y. (2018), Megalakes in the Sahara? A Review. *Quaternary Research*.

Vainer S., **Ben Dor Y.** and Matmon A. (2018), Coupling cosmogenic nuclides and luminescence dating into a unified accumulation model of aeolian landforms age and dynamics: 2 The case study of the Kalahari Erg 3. *Quaternary Geochronology*.

Ben Dor, Y. Harlavan, Y. and Avigad, D. (2018). Provenance of the great Cambrian sandstone succession of northern Gondwana unravelled by strontium, neodymium and lead isotopes of feldspars and clays. *Sedimentology*.

Ahlborn M., Armon M., **Ben Dor Y.**, Neugebauer I., Schwab M. J., Tjallingii R., J.S. Shoqeir, E. Morin, Enzel Y. and Brauer, A. (2018). Increased frequency of torrential rainstorms during a regional late Holocene eastern Mediterranean drought. *Quaternary Research*.

Reports

Ben Dor Y. (2015). The Provenance of the Fine Fraction of the Cambrian Siliciclastic Sequence of Israel; an Isotope Geochemistry Study of Heavy Minerals, Clays and Feldspars (GSI/17/2015).

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Crouvi O., Enzel Y., **Ben Dor Y.**, & Amit R. (2015). Atmospheric Dust, Dust Deposits (Loess) and Soils in the Negev Desert; Fieldtrip Guidebook (GSI/22/2015).

<http://www.gsi.gov.il/uploads/ftp/GsiReport/2015/Crouvi-O-GSI-22-2015.pdf>



Conferences (partial)

Ben Dor Y., Flax T., Levitan I., Enzel Y., Brauer A., Erel Y. (2020). A laboratory investigation of the paleohydrological implications of aragonite precipitation in the endorheic Dead Sea and its precursors. Oral presentation at the Israel Geological Society Annual Meeting. Maale Hahamisha, Israel.

Flax T., **Ben Dor Y.**, Levitan I., Erel Y. (2020). The effect of extracellular substances on aragonite precipitation in Lake Lisan, the Pleistocene predecessor of the Dead Sea. Poster presentation at the Israel Geological Society Annual Meeting. Maale Hahamisha, Israel.

Levitan I., **Ben Dor Y.**, Flax T., Erel Y. (2020). Laboratory investigation of the hydrological implications of aragonite precipitation in the Dead Sea. Poster presentation at the Israel Geological Society Annual Meeting. Maale Hahamisha, Israel.

Quade J., Dente E., Armon M., **Ben Dor Y.**, Morin E., Adam O. and Enzel Y. (2019). How blue was the green Sahara? Reviewing Saharan megalakes evidence for wetter environments. Oral presentation at the International Union for quaternary Research. Dublin, Ireland

Vainer S., **Ben Dor Y.**, and Matmon A. (2019). Unraveling the residence and migration of aeolian deposits by combining cosmogenic nuclides and luminescence data into a unified model. Oral presentation at the International Union for Quaternary Research. Dublin, Ireland.

Müller D., Neugebauer I., Tjallingii R., Schwab M. J., **Ben Dor Y.**, Enzel Y. and Achim B. (2019). A lake sediment record of the last deglaciation derived from the ICDP Dead Sea Deep Drilling Project (DSDDP). Poster presentation at the International Union for quaternary Research. Dublin, Ireland

Ben Dor Y., Armon M., Morin E., Erel Y., and Enzel Y. (2019). What can Dead Sea sediments teach us on the impact of climate change on flood frequencies? A lesson from the Last Glacial Lake Lisan. Poster presentation at the Research Day of the Faculty of Mathematics and Science. Jerusalem, Israel. Jerusalem, Israel.

Ben Dor Y., Armon M., Morin E., Erel Y., Brauer A. and Enzel, Y. (2019). Seasonal to decadal scale hydroclimatic response in the eastern Mediterranean to climate change during the last glacial. Oral presentation at the Israel Geological Society Annual Meeting. Kfar Blum, Israel.

Morag N., Bodzin R. and **Ben Dor, Y.** (2019). New method for heavy mineral assemblage analysis in the Geological Survey of Israel using SEM-EDS phase mapping. Poster presentation at the Israel Geological Society Annual Meeting. Kfar Blum, Israel.



- Sirota I., Armon M., **Ben Dor Y.**, Morin E., Lensky, N.G. and Enzel, Y. (2019). Modelling hydroclimatic control on accreting sedimentary halite-mud sequence. Oral presentation at the Israel Geological Society Annual Meeting. Kfar Blum, Israel.
- Ben Dor Y.**, Armon M., Ahlborn M., Morin E., Erel Y., Brauer, A., Schwab, M. J., Tjallingii, R., and Enzel, Y. (2018). The DSDDP core: from microfacies to hydroclimatology. Oral presentation given at the international ICDP meeting. Jerusalem, Israel.
- Ben Dor, Y.**, and Neugebauer I., (2018). Insights from high resolution archives: from microfacies to microclimate. Oral presentation given at the festive colloquium in honor of Prof. J. Negendank. Potsdam, Germany.
- Ben Dor, Y.**, Armon M., Ahlborn M., Morin E., Erel Y., Brauer A., Schwab M. J., Tjallingii R., and Enzel Y., (2018). Changing flood frequencies under opposing late Pleistocene eastern Mediterranean climates. Oral presentation at the joint IPA-IAL meeting. Stockholm, Sweden.
- Ben Dor, Y.**, Armon M., Ahlborn M., Morin E., Erel Y., Brauer A., Schwab M. J., Tjallingii R., and Enzel Y., (2018). Changing flood frequencies under opposing late Pleistocene eastern Mediterranean climates. Poster presented the Israel Association of Water Resources annual meeting. Neve Ilan, Israel.
- Schwab M. J., Ahlborn M., Armon M., **Ben Dor Y.**, Neugebauer I., Tjallingii R., Hasan S. J., Morin E., Enzel Y. and Brauer A. (2018) Frequency of torrential rainstorms during a regional late Holocene. Poster presented at the EGU General Assembly Conference Abstracts. Vienna, Austria.
- Ahlborn M., **Ben Dor Y.**, Enzel Y., Neugebauer I., Schwab M. J., Tjallingii R., Brauer A. (2017) Latest Pleistocene flash flood deposits in the Dead Sea basin inferred from the ICDP core. Poster presented at the EGU General Assembly Conference Abstracts. Vienna, Austria.
- Ahlborn M., Armon M., **Ben Dor Y.**, Enzel Y., Morin E., Neugebauer I., Schwab M. J. and Brauer, A. (2017) Increased frequency of debris flows during a regional late Holocene drought inferred from a Dead Sea sediment record. Poster presentation at the EGU General Assembly Conference Abstracts. Vienna, Austria.
- Ben Dor Y.**, Ahlborn M., Brauer A., Tjallingii R., Armon M., Morin E. , Schwab M. J., Torfstein A., Erel Y., Enzel Y. (2017) High-Resolution Hydrological Record of the Last Glacial Dead Sea recovered from the ICDP Cores. Poster presented at the EGU General Assembly Conference Abstracts. Vienna, Austria.



- Ben Dor Y.** (2016). The Last Glacial Maximum Record of the Dead Sea Deep Drilling International Continental Drilling Project cores and its Climatological Implications. Orally presented at the International Association of Sedimentologists Summer School of Sedimentology. Alghero, Sicily.
- Ahlborn M., **Ben Dor Y.**, Schwab M. J., Neugebauer I., Plessen B., Tjallingii R., Enzel Y. and Brauer, A. (2016). Extreme flood events in the Dead Sea basin. Poster presented at the EGU General Assembly Conference Abstracts. Vienna, Austria.
- Ben Dor Y.**, Harlavan Y. and Avigad D. (2016). The Provenance of the Fine Fraction of the Cambrian Siliciclastic Sequence of Eilat; an Isotope Geochemistry Study of Heavy Minerals, Clays and Feldspars. Poster presented at the Israel Geological Society Annual Meeting. Eilat, Israel.
- Ben Dor Y.**, Harlavan Y. and Avigad D. (2015). The origins of Feldspars and Clays in the Cambrian Siliciclastic Sequence of Israel; Insights from Pb and Nd Isotopes. Orally presented at the Israel Geological Society Annual Meeting. Kinar, Israel.
- Ben Dor Y.**, Harlavan Y. and Avigad D. (2014). The Isotope-Geochemistry of the Clays (<math><2\mu\text{m}</math>) from the Cambrian Amudei Shelomo and Shehoret Formations: A Provenance Study. Poster presented at the Israel Geological Society Annual Meeting. En Bokek, Israel.
- Ben Dor Y.**, Elazar, O. Harlavan Y. and Avigad D. (2013). Characterizing Provenance Sources of the Siliciclastic Cambrian Formations using Isotope Geochemistry of Heavy Minerals – preliminary results. Poster presented at the Israel Geological Society Annual Meeting. Acco, Israel.