Resume

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Personal

Dotan Rotem
Born: 27 Dec 1969, Haifa, Israel
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Education

- Ph.D. Applying Radium Isotopes to Permafrost Studies, Bar-Ilan University Department of Environment, Planning and Sustainability, and The University Centre in Svalbard, UNIS
- Bachelor's degree in Science Education (1998). University of Haifa, Israel.
- Master's degree in Ecology. (2002) Hebrew University in Jerusalem, Israel. Thesis topic: Comparing species distribution models, logistic regression *vs*. climatic envelope (CEM)
- PhD Currently a student in Geography Department at Bar-Ilan University, Israel.

Work Experience

- Leading environmental education tours for pupils and for the public, as public service (1987-1989).
- Israel Nature & Parks Authority fulfilling the following jobs (1996- present):
- *Environmental Education Guide* (1996-1998)
- *Manager of Prehistoric caves nature reserve (Nahal Me'arot) at Mt. Carmel* (1998-2003)
- *District ecologist of Mt. Carmel* (2003-2008) *and Hai-bar Carmel Manager (a nature reserve and a sanctuary for reintroduced animals). Focal point for the Mt. Carmel biosphere reserve under UNESCO MAB Israel.*
- *Landscape Ecologist at the science division* (2008 – 2026).
- *Director of Nature Reserves Management and Monitoring 2026 - present*

Published Papers in international journals

Roitemberg D. & Ne'eman G**.,** (2000)**,** Canopy Seed bank of *pinus halepensis*, a key for post fire regeneration**,** Environment & ecology 1:6 43-52 (in Hebrew)

Roitemberg, D. and Ne'eman, G. (1998), Post-fire seed dispersal in *pinus halepensis*. Abstract & Poster. MedPine conference.

Goubitz, S., Nathan, R., Roitemberg, R. et al. Canopy seed bank structure in relation to: fire, tree size and density. Plant Ecology 173, 191–201 (2004). https://doi.org/10.1023/B:VEGE.0000029324.40801.74.

Steinitz, O., Heller, J., Tsoar, A., Rotem, D., & Kadmon, R. (2006). Environment, dispersal and patterns of species similarity. *Journal of Biogeography*, *33*(6), 1044-1054. https://doi.org/10.1111/j.1365-2699.2006.01473.x.

Allouche, O., Steinitz, O., **Rotem, D**., Rosenfeld, A., & Kadmon, R. (2008). Incorporating distance constraints into species distribution models. *Journal of Applied Ecology*, *45*(2), 599-609. https://doi.org/10.1111/j.1365-2664.2007.01445.x

Tsoar, A., Allouche, O., Steinitz, O., **Rotem, D**., & Kadmon, R. (2007). A comparative evaluation of presence-only methods for modelling species distribution. Diversity and Distributions, 13(4), 397-405. https://doi.org/10.1111/j.1472-4642.2007.00346.x

Shmida, A., Pollak, G., Frankenberg, E., Levin, N., Nisanhols, N., Walzcak, M., **Rotem, D**., Zalutzki, M., (2011). Country report & case study Israel Section 3: In Radford EA, Catullo G, de Montmollin B (eds) (2011). Important plant areas of the south east Mediterranean region, priority sites for conservation (108 pp.), IUCN, Gland, Switzerland and Malaga, Spain. Gland, Switzerland and Malaga, Spain: IUCN. VIII.

Rotem, D., & Weil, G. (2014). Natural Ecosystem-Units in Israel and the Palestinian Authority-Representativeness in Protected Areas and Suggested Solutions for Biodiversity Conservation. *Journal of Landscape Ecology*, 7(1), 91-109. https://doi.org/10.2478/jlecol-2014-0011.

Weinstein, Y., **Rotem, D**., Kooi, H., Yechieli, Y., Sültenfuß, J., Kiro, Y., Harlavan, Y., Feldman, M., & Christiansen, H. H. (2019). Radium isotope fingerprinting of permafrost - applications to thawing and intra-permafrost processes. *Permafrost and Periglacial Processes*, *30*(2), 104-112. https://doi.org/10.1002/ppp.1999

Segre, H., Carmel, Y., Segoli, M., Tchetchik, A., Renan, I., Perevolotsky, A., **Rotem D**. ... & Shwartz, A. (2019). Cost-effectiveness of uncultivated field-margins and semi-natural patches in Mediterranean areas: A multi-taxa, landscape scale approach. *Biological Conservation*, *240*, 108262. https://doi.org/10.1016/j.biocon.2019.108262.

Raviv T., **Rotem D**., Zanzuri A. and Vlotner A.T., 2022, Carbon sequestration and carbon capture by natural ecosystems. Ecology and Environment 13(6): 6-14

Rotem, D., Lyakhovsky, V., Christiansen, H. H., Harlavan, Y., and Weinstein, Y. (2023), Permafrost saline water and Early to mid-Holocene permafrost aggradation in Svalbard, The Cryosphere, 17, 3363–3381, https://doi.org/10.5194/tc-17-3363-2023.

Published Papers in Israel (in Hebrew)

Roitemberg D. (2002), Management Plan for Nahal Mearot Nature reserve, NPA, Jerusalem. (in Hebrew)

Rotem D. & Arnon A,. (2007), Management Plan for Tuf Kerem Maharal Nature reserve, NPA, Jerusalem. (in Hebrew)

Rotem D. (2008), Management Plan for Alone Aba Nature reserve, NPA, Jerusalem. (in Hebrew)

Rotem D. (2008), Management Plan for Alone Itzhak Nature reserve, NPA, Jerusalem. (in Hebrew)

Rotem D., & Elbaz N., (2005), Forest and Maquie Management Plan for the Carmel Mt. National Park and Nature Reserve. Internal paper NPA. (in Hebrew).

Rotem D., & Elbaz N., (2007), Forest and Maquie five years Management Plan for the Carmel Mt. National Park and Nature Reserve. Internal paper NPA. (in Hebrew).

Rotem D., 2011, Clean Energy in Better Environment – Possible Ecological Impacts of Solar Plants in Israel, Tashtiot (Infrastructure magazine) 8 pp 40-43. (in Hebrew).

Rotem D., 2011, Possible Ecological Impacts of Solar Plants in Israel, Nature and Parks Authority, Science Division, Jerusalem. (in Hebrew).

Rotem D. & Porat Y., 2011, Soil Conservation and its Impact on Reptiles and Amphibians Biodiversity in Almond Plantations in Yvne'el Plato Israel. Applied for Nekudat Hen Foundation. (in Hebrew).

Rotem D. & Porat Y., 2011, Soil conservation and its Impact on Reptiles and Amphibians Biodiversity in Almond Plantations in Yvne'el Plato Israel. Poster and Lecture in the Symposium - Soil depletion and Geo – Informatics – Ben-Gurion Univ. (in Hebrew).

Kaplan M., Vitman N., **Rotem D**. & Dufor-Dror J.M., 2011, Planning Ecological Corridor Between Tzevaim Plato and Mt. Gilboa, Israel. Ecology & Environment 2, pp 96-102. (in Hebrew).

Weil G., **Rotem D.** & Levin N., 2011, A respond to :Planing Ecological Corridor Between Tzevaim Plato and Mt. Gilboa, Israel. Ecology & Environment 4, pp 243-245. (in Hebrew).

Ben israel A., Ramon A. & **Rotem D**., (2011), Short range land rental and its ecological impacts: The Western Negev Case Study. Nature and Parks Authority, Ben-Gurion Univ. & Deshe institute. (in Hebrew).

Rotem D., (2012), Viaducts (Overpasses) in Israel, Nature and Parks Authority, Science Division, Jerusalem. (in Hebrew).

Ben israel A., Ramon A. & **Rotem D**., (2012), Agricultural land use expansion in the western Negev and its ecological impacts, Ecology & Environment 1. (in Hebrew).

Rotem D. & Alon E., (2012), The environmental significance of the governmental plan for regularization of the Bedouin's settlements in the Negev. (The NPA point of view) Ecology & Environment 1. (in Hebrew).

Rotem D. & Ohad H., (2012), The Nature & Parks Authority Policy for Wind Turbines Plans in Israel. Nature and Parks Authority, Science Division, Jerusalem. (in Hebrew).

Rotem D. (2012), Off-trail policy inside nature reserve in Israel Nature and Parks Authority, Science Division, Jerusalem. (in Hebrew).

Rotem D. (2014), Influence of fences in open landscape INPA policy and recommendations for friendly fencing. . Nature and Parks Authority, Science Division, Jerusalem. (in Hebrew).

Lotan A., Reuveni H., **Rotem D**., Gofer N., Bar-Ilan B. & Koniak G., (2015), Defining the Important Ecosystem Services of the Biosphere Reserve of Ramat Menashe in Israel with Local Citizens. Nekudat Hen (in Hebrew).

Rotem D. & Kaizer U., (2015) *Sarcopoterium spinosum* management in Tzafit Hills Nature Reserve Israel, Israel Nature & Parks Authority Jerusalem (in Hebrew).

Rotem D., Angert N., Ezri A., Ben-nun G. & Goldstein H. (2015), Ecological corridors in Israel, principals and recommendations for ecological corridors planning in Israel. Israel Nature & Parks Authority Jerusalem (in Hebrew).

Elbaz N., Hashmonai I., Tesler N. & **Rotem D.,** (2015), Vascular plants management in the Mt. Carmel National Park and Nature reserves. Israel Nature & Parks Authority Jerusalem (in Hebrew).

Rotem D., Weil G., Walczak M & Amir S., (2016) Representativeness of natural ecological units in protected areas in Israel. Ecology & Environment 1 (in Hebrew).

Rotem D. Shkedy Y. (2019), Ecological corridors in Israel – from theory to practice. Ecology & Environment 1. (in Hebrew).

Yahel P. & **Rotem D**. (2019), Management of KKL forests as part of the Israeli ecological corridors network. Ecology & Environment 1. (in Hebrew).

Rozenfeld A. & **Rotem D**. (2019), Influence of fences, infrastructure and built areas on presence and movement of large and mid-size mammals, as proxy for ecological corridors planning. Ecology & Environment 1. (in Hebrew).

Trachtenbrot A. & **Rotem D.** (2019), Planning the eastern ecological corridor of Israel. Ecology & Environment 1. (in Hebrew).

Rotem, D., Weinstein, Y., Harlavan Y., Torfstein A., and Christiansen, H. H. (in press), Intra-permafrost fluid flow and ground ice formation– time constraints by Ra isotopes

Rotem, D., Weinstein, Y., Christiansen, H. H., Sültenfuß, J., & Hodson, A. (2024). Ra isotope perspective on the hydrology and continuity of permafrost in the high Arctic. *Science of The Total Environment*, *950*, 175412. https://doi.org/10.1016/j.scitotenv. 2024.175412

Rotem, D., Lyakhovsky, V., Christiansen, H. H., Harlavan, Y., and Weinstein, Y.: (2023) Permafrost saline water and Early to mid-Holocene permafrost aggradation in Svalbard, The Cryosphere, 17, 3363–3381, https://doi.org/10.5194/tc-17-3363-2023.

Dotan Rotem, Vladimir Lyakhovsky, Yehudit Harlavan, Hanne H. Christiansen & Yishai Weinstein. (2021). Water salinity as a clue to fast epigenetic permafrost formation in Svalbard. Lecture in the Israeli Geological Society.

Hila Segrea., YohayCarmel., Michal Segoli., Anat Tchetchik., IttaiRenane., Avi Perevolotsky, **Dotan Rotem,** and Assaf Shwartz (2019), Cost-effectiveness of uncultivated field-margins and semi-natural patches in Mediterranean areas: A multi-taxa, landscape scale approach. Biological Conservation, 240.

Weinstein Y., **Rotem D**., Kooi H., Yechieli Y., Sültenfuß ., Kiro Y., Harlavan Y., Feldman M and Christiansen H. H. (2019), Permafrost thawing and freezing - direct tracking with radioisotopes. Permafrost and Periglacial Processes.

Dotan Rotem, Yishai Weinstein, Henk Kooi, Yoseph Yechieli, Jurgen Sültenfuß, Yael Kiro, Yehudit Harlavan, Mor Feldman, Hanne H. Christiansen (2018), Tracking Permafrost Thawing with Radium Isotopes Lecture in the 7th International Ra-Rn Workshop.

Dotan Rotem, Yishai Weinstein, Hanne H. Christiansen Yoseph Yechieli, Yehudit Har-Lavan, Henk Kooi (2017), The Israeli Contribution to the Global Warming Effect: Using Radium Isotopic Ratio as a Tracer for Permafrost Thaw. Lecture in The Israel Society of Ecology and Environmental Sciences conference in Israel, (in Hebrew).

Yishai Weinstein, **Dotan Rotem**, Hanne H. Christiansen Yoseph Yechieli, Yehudit Har-Lavan Yael Kiro, Henk Kooi (2016),.Identifying the permafrost isotopic signal

and assessing permafrost-freezing age by Radionuclides Isotopes.. Lecture in ICOP conference, Potsdam, Germany.

Dotan Rotem., Weinstein Y., Christiansen H. H., Yechieli Y., Harlavan Y., Porat N., Bar-Matthews M., Kiro Y., Kooi H. (2016), Assessing Permafrost Formation Age by Radium Isotopes. Poster presentation & Abstract in Geological Society Conference – Eilat.

Participation in conferences and workshops:

1998 Poster presentation In MedPine conference: Post-fire seed dispersal in *pinus halepensis*.

2003 international workshop and training on sea turtle project in Cyprus.

2005 international workshop on Pelicans & Cormorants management in Israel.

2007 Lecture on Conflicts and Management of Pelicaniformes in Israel. International conference in Romania.

2008 Head of the Israeli delegation to UNESCO conference on Biosphere reserves – Madrid, Spain.

2011, Lecture in The Israel Society of Ecology and Environmental Sciences conference in Israel: Ecological corridors in the Lev-Hasharon municipality – ecological indicators (in hebrew)

2013, Poster presentation in IALE conference in Great Manchester: Landscape mapping in Israel

2013, Poster presentation in IALE conference in Great Manchester: Mapping and implementing Ecological corridors in Israel

2013, Poster presentation & Abstract in The Israel Society of Ecology and Environmental Sciences conference in Israel: Mapping Ecosystems (Ecosystem-units) in Israel (in hebrew)

2013, Lecture in the Israel Zoological society conference: the impact of fencing on Large and medium size mammals in open landscape in Israel.

2014, Lecture in The Israel Society of Ecology and Environmental Sciences conference in Israel: Ecological corridors vs ecosystems are the preservation efforts similar? (in hebrew)

2014, Poster presentation & Abstract in The Israel Society of Ecology and Environmental Sciences conference in Israel: Friendly agriculture in Lev Ha-Sharon municipality (in hebrew)

2016, Poster presentation & Abstract in Geological Society Conference – Eilat, *Rotem D.*, Weinstein Y., Christiansen H. H., Yechieli Y., Harlavan Y., Porat N., Bar-Matthews M., Kiro Y., Kooi H. Assessing Permafrost Formation Age by Radium Isotopes

2016 Lecture in ICOP conference, Ptsdam, Germany: Yishai Weinstein, **Dotan Rotem**, Hanne H. Christiansen Yoseph Yechieli, Yehudit Har-Lavan Yael Kiro, Henk Kooi ,Identifying the permafrost isotopic signal and assessing permafrost freezing age by Radionuclides Isotopes.

2017, Lecture in The Israel Society of Ecology and Environmental Sciences conference in Israel: **Dotan Rotem,** Yishai Weinstein, Hanne H. Christiansen Yoseph Yechieli, Yehudit Har-Lavan, Henk Kooi, The Israeli Contribution to the Global Warming Effect: Using Radium Isotopic Ratio as a Tracer for Permafrost Thaw. (in hebrew)

2018 Lecture in the 7th International Ra-Rn WorkshopTracking Permafrost Thawing with Radium Isotopes Dotan Rotem, Yishai Weinstein, Henk Kooi, Yoseph Yechieli, Jurgen Sültenfuß, Yael Kiro, Yehudit Harlavan, Mor Feldman, Hanne H. Christiansen

2019 Lecture in the Israeli Geological Society Tracking Permafrost Thawing and intra-permafrost processes with Radium Isotopes Dotan Rotem, Yishai Weinstein, Henk Kooi, Yoseph Yechieli, Jurgen Sültenfuß, Yael Kiro, Yehudit Harlavan, Mor Feldman, Hanne H. Christiansen.

Weinstein, Y., **Rotem, D**., Kooi, H., Yechieli, Y., Sültenfuß, J., Kiro, Y., ... & Christiansen, H. H. (2019). Radium isotope fingerprinting of permafrost-applications to thawing and intra-permafrost processes. *Permafrost and Periglacial Processes*, *30*(2), 104-112.

Grants

2009 Nekudat Hen, **Project Title** Soil conservation and its Impact on Reptiles and Amphibians Biodiversity in Almond Plantations in Yvne'el Plato Israel – 15,000$

2011 The Israel Taxonomy Initiative**. Project Title**: Field survey and taxonomy of isolated sandy ecosystems in the Israely Negev desert. Tel Aviv Univ & INPA – 8,100$

2016 Arctic Field Grant (AFG): **Project Title:** *Identifying the permafrost isotopic signal and assessing permafrost freezing age by radionuclides. – 73,000 NOK*