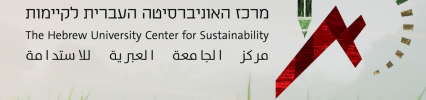




15 LIFE ON LAND



Scientific Progress

Dr. Yael Mandelik, an ecologist and conservation biologist is working on the interaction between biodiversity, ecosystem functions, and land-use change, (Department of Entomology at the Robert H. Smith Faculty of Agriculture, Food and Environment). Her research focuses on insect pollinators and pollination as a central ecosystem service, and explores questions related to pollination services to crops and wild plants, anthropogenic-induced changes in pollinator communities, pollinator health, and pollinator conservation. Through her research, Dr. Mandelik seeks to restore communities of these beneficial insects in agricultural, afforested, and natural landscapes, and to contribute to sustainable agriculture production and biodiversity conservation.

In the same faculty, at the Department of Environmental Economics and Management, Prof. Iddo Kan studies the economic analysis of agricultural land use, and investigates irrigation and drainage management, solid-waste management, assessment of climate-change impacts, rural landscape preservation, evaluation of externalities, and water pricing in political decision-making systems. Prof. Kan's expertise focuses on integrating natural processes into economic analyses in order to characterize management strategies and policies of agricultural land use.

Community Impact

The Koret School of Veterinary Medicine is an academic teaching and research center operating within the Faculty of Agriculture of Hebrew University and is the only academic institution in Israel that grants academic degrees in animal medicine. Other than treating over 20,000 veterinary cases per year, the hospital operates a program in cooperation with several local authorities and social organizations for the treatment of abandoned pets in need of medical treatment at a reduced cost. Prof. Amir Steinman, the director of the hospital, researches antibiotics resistance in animals, equine diseases and medicine, and multidrug resistant bacteria.

In June 2020, the Soil and Water Sciences Department at the Robert H. Smith Faculty of Agriculture, Food and Environment commemorated the "World Day to Combat Desertification and Drought." To mark this day, all researchers and students were invited to take part in an online mini-symposium. The goal of the mini-symposium is to acquaint the public and research community with the large variety of research related to desertification, discussing

soil degradation, drought and water scarcity, effects of climate change on land, and effects of desertification on biodiversity and on human populations.

Studies and Learning Initiatives

The Alexander Silberman Institute of Life Science offers a master's degree at the Department of Plant Sciences, focusing on the topics of biochemical and physiological issues unique to plants. The curriculum includes courses on how plants regulate nutrient resources under stress conditions and during development, how plants break down complex substances in the cell when they need to produce available energy, identification of genes related to the biological clock mechanism in plants, and the molecular mechanism for plant resistance to environmental stresses.

The Department of Entomology offers courses about insects that exert an economic or health burden on human activities and societies, as opposed to beneficial insects that provide vital ecological services. The department applies a multidisciplinary biological approach with the ultimate goal of enhancing agricultural production and protecting human and livestock health, while conserving the diversity and robustness of the environment for generations to come.

Actions on Campus

HUJI's biological and paleontological collections contain a unique diverse collection of flora and fauna of the Middle East and its adjacent seas, assembled over a period lasting more than one hundred years. As part of the National Natural History Collections, these collections serve as a safe repository and reliable baseline for the biota of Israel in the wake of unprecedented global environment changes that impact the Mediterranean Basin. Due to the geographic position of Israel at the meeting point of several biogeographic and climatic regions, its biodiversity has the potential of serving as a sensitive indicator for large-scale regional and global changes.

The University Botanical Garden in Givat Ram is a center for education, training and research, and the largest botanical garden in Israel, with the largest collection of living plants in Israel and the Middle East. The aim of the botanical garden is to inspire and instill ways of carrying out and maintaining informed conservation of the variety of plants in their environmental context, as a basis for our physical, ethical, and cultural existence. The garden attracts diverse audiences for educational, scientific, cultural, and recreational activities combined with core botanical, horticultural, agricultural, and ecological studies.