



# DEALING WITH ANIMAL PEST INVASIONS IN AUSTRALIA

**Associate Professor Salit Kark's Future Fellowship will allow her research team to build and analyse a comprehensive database of Australia's alien invasive mammals and birds.**

Dr Kark said she had been fascinated by wildlife and conservation since she was a child – in fact, her given name “Salit” in Hebrew is the name of a songbird (wheatear).

Since studying towards her PhD from the Hebrew University of Jerusalem, she worked across both global and local scales (examining changes in biodiversity across latitudinal and altitudinal gradients) and has worked in both terrestrial (birds and mammals mostly) and marine ecosystems with a focus on the Mediterranean Basin and Sea.

Dr Kark joined The University of Queensland in July 2013 as an Associate Professor and ARC Future Fellow, but has been collaborating with UQ since 2007 when she spent a sabbatical at UQ as an ARC Linkage International Fellow. She has served as an Honorary Reader (2008–11) and Honorary Associate Professor at UQ since 2011.

“Having previously worked extensively in Europe, the Mediterranean and North America, I am intrigued by the uniqueness of Australia's ecosystems and the interactions between Australia's native and invasive alien species,” Dr Kark said.

She said her Future Fellowship relates to her broader interest in studies of the patterns and processes shaping biological diversity



(biodiversity) in both natural and human-dominated landscapes.

Her study is believed to be one of the first worldwide to disentangle biological, climatic and socioeconomic factors shaping invasion using the context of Australian vertebrate invasive pests such as the fox and Indian myna.

“Using this database, we can compare continental-scale patterns and processes driving invasion outcomes with those we found in an earlier project we led in Europe and the Mediterranean,” Dr Kark said.

“The study will allow us to contribute to Australia's ability to better prioritise how we deal with the many invasive species and make better decisions.

“I am learning about the wide array of challenges we face in addressing alien invasions in a large, isolated island that has held for millions of years many endemic mammal species which occur nowhere else on earth, some of which are threatened by invasive species.

“As a member of the School of Biological Sciences and Chief Investigator of the ARC Centre of Excellence for Environmental Decisions, I have an exceptional opportunity to integrate approaches from biology with decision science that will hopefully lead to enhanced science-based conservation, contributing to better science-policy-management integration.”

In this framework, she studies how collaboration and conflict across boundaries can change conservation plans and outcomes globally and at regional scales, within the framework of a new direction of research she has termed “interactions science”.

“Studying and better understanding the ecology, behaviour, life history and the patterns and processes that shape invasion success is crucial towards improving our ability to wisely deal with the challenges of addressing biological invasions and their impacts on native biodiversity and human wellbeing, as well as minimise their negative impacts,” she said.

“This is particularly important on a global scale since we are constantly transforming native environments into human-dominated ones, leading to a process some scientists have termed ‘biotic homogenisation’.

“This means that invasive species successfully thrive in the many different parts of the world to which they have been moved by humans – either deliberately or non-deliberately, e.g. as stowaways – and may adversely affect the native flora and fauna.”

## BIOGRAPHY / CONTACT DETAILS

- **Position:** Associate Professor, UQ School of Biological Sciences
- **Qualifications:** PhD (Hebrew University of Jerusalem), Postdoctoral Fellow (Stanford University)
- **Publications:** 72, including 8 book chapters
- **Grants:** *The role of behavioural interactions in shaping invasion dynamics: A global synthesis using the common myna as a model system* (2014–2016) ARC Discovery Project  
*Systematic prioritisation of action for confronting invasive vertebrates in Australia (INVERSE)* (2013–2017) ARC Future Fellowship  
*ARC Centre of Excellence for Environmental Decisions (CEED)* (2011–2018) ARC
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