

## CURRICULUM VITAE AND LIST OF PUBLICATIONS

### I. CURRICULUM VITAE

#### 1. Personal Details

**Name:** Ido Izhaki  
**Place and Date of Birth:** Afula, Israel, March 1<sup>st</sup>, 1954  
**Date of Aliyah:** -  
**Marital Status:** Married + 2  
**Citizenship and Identity Card Number:** Israeli, 052254919  
**Permanent Home Address:** 21/d Ha-Kongress Ha-Zioni St., Afula 18422, Israel  
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University of Haifa, Israel, Tel: 04-8249025  
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#### 2. Higher Education

B.Sc. Biology: The Hebrew University of Jerusalem,  
1976-1979, B.Sc. (with Distinction) Degree: May 1980.

Ph.D. Environmental Biology: The Hebrew University of Jerusalem,  
Department of Zoology, 1980-1986. Ph.D. Degree: May 1987.

Post- Doctoral Department of Biology, Kansas State University, USA  
1986-1987.

Research Mitrani Center for Desert Ecology, Ben-Gurion University of the Negev, Israel  
1987-1988.

### **3. Academic Ranks and Tenure in Institutes of Higher Education**

<b>Dates</b>	<b>Name of Institution and Department</b>	<b>Rank</b>
1.12.04	University of Haifa – Oranim, Department of Science Education - Biology	Full Professor
1.10.99 – 30.11.04	University of Haifa – Oranim, Department of Science Education - Biology	Associate Professor
1994-1999	University of Haifa – Oranim, Department of Science Education - Biology	Senior Lecturer, Tenure
1991-1992	Technion, Faculty of Biology	Extra mural Teacher
1990-1995	University of Haifa – Oranim, Department of Science Education - Biology	Lecturer
1988-1990	University of Haifa – Oranim, Department of Science Education - Biology	Instructor Doctor
1987-1988	Ben-Gurion University of the Negev, Biology Dept.	Research Fellow
1986-1987	Kansas State University, Department of Biology	Research Fellow
1984-1986	The Hebrew University of Jerusalem, Department of Zoology	Instructor
1980-1984	The Hebrew University of Jerusalem, Department of Zoology	Teaching Assistant

<b>Research Visits to Overseas Universities</b>	
2001-2002	Sabbatical leave: Department of Zoology, University of Florida, U.S.A. Project: Post-fire seed dispersal.
1995-1996	Sabbatical leave: Department of Zoology, University of Florida, U.S.A. Project: Effects of seed-harvesting ants and controlled burning on an annual plant community.

#### **4. Offices in University Academic Administration**

<b>Dates</b>	<b>Office</b>
2010-	Carmel Research Center, Director
2009 – 2012, 2014 -	Member of The University Promotion committee
2006 -	Member of Ph.D. committee, Department of Evolutionary and Environmental Biology.
2006-2009, 2012- 2015	Member of the Senate, Haifa University
2004	Member of Scientific Equipment Committee, Research Authority, Haifa University.
2004	Member of a Teaching Committee for “Ofakim” – a unique B.A. program of Haifa University for excellent students.
2003 - 2005	Member of Scientific Equipment Committee, Department of Evolutionary and Environmental Biology.
2003 - 2005	Member of a Committee for Nomination of Teaching Fellows, Faculty of Science and Science Education.
2003 - 2005	Member of a Committee for promotion of Research Fellows/Senior Researchers, Research Authority, Haifa University.
2003, 2006	Member of Pilot Research Grants Committee, Research Authority, Haifa University
2001	Member of Postdoctoral Fellowships Committee, Research Authority, Haifa University.
2000 - 2001	Member of the Research Committee, Unit of Research and Evaluation, Oranim - The Academic College of Education and Oranim – University Division, University of Haifa.
1996 – 2000	Chairman of the Department of Biology, University of Haifa at Oranim.
1992 - 1995 1996 - 2001	Member of the Teaching Committee, Department of Biology, University of Haifa at Oranim.

## **5. Scholarly Positions and Activities Outside the University**

<b>Dates</b>	<b>Name of Institution and Department</b>	<b>Activity</b>
2016	Israel Nature and Parks Authority	Bird Sensitivity Mapping for Wind Energy Developments and Associated Infrastructure in Israel, Committee head.
2008 -	ISF X 5, BSF, GIF	Committee chair/member
2010 - 2012	Ministry of Environment Protection	Member in Carmel post-fire governmental committee
2005- 2008	The Zoological Society of Israel	Chairman
1994-2010	International Birdwatching Center, Eilat, Israel	Member of the scientific committee
1994-2004	Open University, Tel-Aviv, Israel	Chief scientist, course development in ecology
1998-2002	Society of Nature Protection in Israel	Member of public council
2004-2008	The Zoological Society of Israel	Board member
2004	Ministry of Sciences	Member of the scientific committee – research grants
2001-2002	Ministry of Education, Jerusalem, Israel	Scientific advisor in the development of course and a textbook in Environmental Sciences
2001	MEDECOS 2003	Member of scientific committee
1998-1999	Medpine – Mediterranean Pines International Workshop, Feb. 1999	Organizer (with Dr. G. Ne'eman)
1998	6 <sup>th</sup> International Meeting of "Rodens & Spatium"	Member of the organizing committee
1987-1988	Mitrani Center for Desert Ecology, Ben-Gurion University of the Negev	Postdoctoral Research Fellow: "The load of herbivorous insects on primary production and reproduction of plants in desert habitats of the Negev"
1986-1987	Division of Biology, Kansas State University	Postdoctoral Research Fellow: "Reproductive strategies of wind-pollinated trees in the temperate deciduous forest"

**Editorial Positions:**

<b>Dates</b>	<b>Journal</b>	<b>Activity</b>
2004 -	Journal of Ornithology	Member of the Editorial Board
2006 -	Israel Journal of Ecology & Evolution	Member of the Editorial Board
2012 -	Movement Ecology	Member of the Editorial Board

**Referee for the Following Scientific Journals:**

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| 1. Acta Oecologica                           | 16. Journal für Ornithologie                                 |
| 2. African Journal of Ecology                | 17. Journal of Animal Ecology                                |
| 3. American Naturalist                       | 18. Journal of Applied Ecology                               |
| 4. Behavioral Ecology and Sociobiology       | 19. Journal of Arid Environments                             |
| 5. Behavioural Processes                     | 20. Journal of Avian Biology                                 |
| 6. Biological Invasions                      | 21. Journal of Chemical Ecology                              |
| 7. Biological Journal of the Linnean Society | 22. Journal of Comparative Physiology - B                    |
| 8. Biotropica                                | 23. Journal of Tropical Ecology                              |
| 9. Copeia                                    | 24. Journal Vie et Milieu- Life & Environment                |
| 10. Ecography                                | 25. Mammalian Biology  |
| 11. Ecology                                  | 26. Oecologia  |
| 12. EcoScience                               | 27. Oikos  |
| 13. Ibis                                     | 28. Ostrich  |
| 14. Israel Journal of Ecology & Evolution    | 29. PeerJ  |
| 15. Israel Journal of Zoology                | 30. PloSOne  |
|  | 31. Perspectives in Plant Ecology, Evolution and Systematics |
|  | 32. Plant Ecology  |
|  | 33. Seed Science Research                                    |
|  | 34. Wilson J. of Ornithology                                 |

**Referee for the Following Research Grants Committees:**

- 1) The Israel Academy of Sciences and Humanities - Basic Research (ISF).
- 2) The German-Israeli Foundation for Scientific Research and Development (GIF).
- 3) United States - Israel Binational Science Foundation (BSF).
- 4) National Science Foundation (USA) (NSF).
- 5) The Israel Inter-University Fund for Ecology.

- 6) Grant Agency of the Czech Republic.
- 7) National Geographic Society.
- 8) Ministry of Sciences, Israel.
- 9) Ministry of Environment, Israel.
- 10) IALC – International Arid Land Consortium.
- 11) Minerva Movement Ecology.
- 12) South African National Research Foundation (NRF).

**Referee/Examiner of M.Sc., M.A., Ph.D. Theses:**

- 1) M.A. thesis (1999) submitted to the Department of Geography, University of Haifa on the effect of grazing on the chemical quality of run-off water.
- 2) Ph.D. Committee (1998-2001), Department of Zoology, Tel Aviv University on the ecology of gall-forming aphids.
- 3) Ph.D. thesis (2000) submitted to the Ben-Gurion University of the Negev on the effect of scrub fragmentation on bird communities.
- 4) Ph.D. thesis (2000) submitted to the University of Tel-Aviv on sexual behavior of sunbirds.
- 5) Ph.D. thesis (2001) submitted to the Technion - Israel Institute of Technology on the role of invertebrates in leaf litter decomposition.
- 6) Ph.D. thesis (2001) submitted to the Technion - Israel Institute of Technology on ontogenesis of cormorants.
- 7) Ph.D. thesis (2002) submitted to the Technion - Israel Institute of Technology on the visual capacity of the Great Cormorant.
- 8) Ph.D. thesis (2002) submitted to Tel-Aviv University on population growth of reintroduced Persian Fallow Deer.
- 9) Ph.D. thesis (2002) submitted to Ben-Gurion University of the Negev on temporary pool community.
- 10) Ph.D. Committee (2002-2004), Department of Biology, Technion - Israel Institute of Technology on the underwater hydrodynamics of cormorants.
- 11) Ph.D. thesis (2003) submitted to the University of Tel-Aviv on soaring bird migration.
- 12) M.A. thesis (2004), submitted to Department of Natural Resources and Environmental Management, University of Haifa, on the bio-economic value of vultures.
- 13) M.Sc. thesis (2004), submitted the Technion – Israel Institute of Technology, on environmental diversity of Mount Carmel, Israel.
- 14) M.A. thesis (2004), submitted to Department of Geography and Environmental Studies, University of Haifa, on GIS models for long-term forest management plans.
- 15) M.Sc. thesis (2004), submitted to Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev, on the role of predation and plant cover in determining isopod density.
- 16) M.Sc. thesis (2005), submitted to Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev, on bird migration and global climate changes.
- 17) M.Sc. thesis (2005), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on risks of predation and desiccation of dipterans in temporary pools.

- 18) M.Sc. thesis (2005), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the relations between first polar body and nucleolar precursor body's abnormal morphology and low ovarian reserve.
- 19) Ph.D. thesis (2006), submitted to Ben-Gurion University of the Negev on bird diversity of wintering birds.
- 20) Ph.D. thesis (2006), submitted to the Madurai University, India, on localization of prey by the gleaning bat (*Megaderma lyra*).
- 21) Ph.D. Committee (2006), Department of Ecology, Systematics and Evolution, The Hebrew University of Jerusalem, on seed dispersal by the Egyptian fruit bat (*Rousettus aegyptiacus*).
- 22) Ph.D. thesis (2006), submitted to Tel-Aviv University on chemotypic differentiation among plant populations.
- 23) Ph.D. thesis (2006), submitted to Ben-Gurion University on host-parasite interactions: Role of ecological factors.
- 24) Ph.D. Committee (2006-), Department of Zoology, Tel-Aviv University, on energetic factors affecting seasonal migration, sexual segregation and fattening pattern in an arid-zone insectivorous bat.
- 25) M.Sc. thesis (2007), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the influence of environmental factors on activity rhythm.
- 26) Ph.D. Committee (2007-), Department of Zoology, Tel-Aviv University, on Neurobiological aspects of migratory behavior in birds: a comparative study of migrant and resident species.
- 27) M.Sc. thesis (2007), submitted to Faculty of Biology, Technion- Israel Institute of Technology, on directing rat movements using vibrissal system.
- 28) Ph.D. thesis (2007), submitted to Tel-Aviv University, on amphibian population decline.
- 29) M.Sc. thesis (2007), submitted to Faculty of Biology, Technion- Israel Institute of Technology, on physiological and behavioral of cormorants.
- 30) M.Sc. thesis (2007), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on bacterial community structure and dynamics.
- 31) Ph.D. thesis (2008), submitted to Tel-Aviv University, on genetic heritability of nestling begging.
- 32) M.A. thesis (2010), submitted to The Porter School of Environmental Studies, Tel-Aviv University, on bird urban ecology.
- 33) M.A. thesis (2010), Submitted to The Department of Geography and Environmental Studies, University of Haifa on fragmentation effect on large mammals.
- 34) M.Sc. thesis (2010), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on population's genetic structure of generalist and specialist species.
- 35) M.A. thesis (2010), submitted to Dept. of Geography and Environment, Haifa University on the effect of visitors on bird behavior in Lake Agmon.
- 36) M.Sc. thesis (2011), submitted to Dept. of Zoology, Tel-Aviv University, on mating behavior of sunbirds.
- 37) M.Sc. thesis (2011), submitted to faculty of Science and Agriculture, University of KwaZulu-Natal, South Africa, on fruit selection by birds.
- 38) M.Sc. thesis (2011), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the interactions between phytoplankton, zooplankton and fish in Lake Kinneret.
- 39) M.Sc. thesis (2011), submitted to Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, on the effect of cattle grazing on honeybee foraging.
- 40) Ph.D. thesis (2011), submitted to faculty of Science and Agriculture, University of KwaZulu-Natal, South Africa, on invasive fleshy-fruited plants in South Africa.

- 41) M.A. thesis (2011), submitted to Dept. of Geography and Environment, Haifa University on plant regeneration in areas affected by construction waste.
- 42) M.Sc. thesis (2011), submitted to the Faculty of Civil and Environmental Engineering, the Technion, on the spatial distribution of the Asiatic Wildass (*Equus hemionus*).
- 43) Ph.D. Committee (2011 - 2015), Department of Zoology, Tel-Aviv University, on the effect of group size and composition on individual behaviour, group dynamics and population regulation in the Arabian Babbler (*Turdoides squamiceps*).
- 44) Ph.D. thesis (2012), submitted to The Hebrew University of Jerusalem, on the use of barn owls for biological control.
- 45) M.Sc. thesis (2013), submitted to Dept. of Zoology, Tel-Aviv University, on the competition on nesting sites between Great tits and House sparrows.
- 46) M.Sc. thesis (2013), submitted to Dept. of Zoology, Tel-Aviv University, on the effect of eumelanin-based coloration on antipredator strategies in Barn owls.
- 47) Ph.D. Committee (2013-2016), Department of Ecology, Evolution and Behavior, The Hebrew University of Jerusalem, on the movement ecology of jackdaws.
- 48) M.Sc. thesis (2013), submitted to the Technion – Israel Institute of Technology, on the linkage between environmental heterogeneity and biodiversity.
- 49) Ph.D. External Examiner of pre-doctoral exam (2013), Department of Life Sciences, Ben-Gurion University, on spatial ecology of bird species diversity in the Judean lowlands.
- 50) Ph.D. thesis (2014), submitted to Tel-Aviv University, on ecosystem services in wetlands.
- 51) M.Sc. thesis (2014), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on *Legionella* spp. Ecology in a drinking water system in Israel.
- 52) M.Sc. thesis (2015), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the impact of growing conditions on the glucosinolate content of *Ochradenus baccatus*.
- 53) M.Sc. thesis (2015), submitted to University of KwaZulu-Natal, South Africa, on fruit digestion and selection in selected southern African avian frugivores.
- 54) M.Sc. thesis (2015), submitted to Dept. of Zoology, Tel-Aviv University, on the breeding biology of birds in urban versus non-urban habitats.
- 55) Ph.D. thesis (2015), submitted to The Faculty of Natural and Agricultural Sciences, University of Pretoria, South-Africa on the effects of toxin nectars on birds.
- 56) Ph.D. Committee (2016 - present), Department of Zoology, Tel-Aviv University, on the invasive populations of the Common Myna (*Acridotheres tristis*).
- 57) M.Sc. thesis (2016), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the genetic composition of Aleppo pine at Mt. Carmel and the level of genes' introgression from planted forests, as a basis for conservation policy.
- 58) Ph.D. thesis (2016), submitted to the School of Biological Sciences, Victoria University of Wellington, New Zealand, on tri-trophic interactions of a predator-parasite-host assemblage in New Zealand.
- 59) Ph.D. Committee (2016 – present), Department of Zoology, Tel-Aviv University, on the movement ecology of over-wintering Black Kites (*Milvus migrans*) in the Northern Negev, Israel with implications on aircraft collision risks.
- 60) Ph.D. External Examiner of pre-doctoral exam (2016), Department of Life Sciences, Ben-Gurion University, on spatio-temporal dynamics of seed germination in Mediterranean woodlands.
- 61) M.Sc. thesis (2016) submitted to the Technion – Israel Institute of Technology, on the visual characters as proxy for ecological quality (as measured by woody vegetation and nesting birds)? a case study in Ramat Hanadiv Park.
- 62) M.Sc. thesis (2016), submitted to Dept. of Evolutionary and Environmental Biology, Haifa University, on the regeneration and mortality of woody species in the



Mediterranean landscape - Effect of disturbance-based management, competition and environmental conditions.

- 63) Ph.D. External Examiner of pre-doctoral exam (2016), Technion – Israel Institute of Technology, on Modeling alternatives for planning and agricultural ecological corridors in management of environments.

## 6. Active Participation in Scholarly Conferences

### A. International Conferences

	Conference	Place and Dates	Title of Your Presentation or Discussion
1)	Migration: Mechanism and Adaptive Significance	Austin, Texas, U.S.A., October 1983	The interdependence of migrating passerines and fruit-producing plants occurring of Palaearctic migration routes (with U. Safriel).
2)	The 19th International Ornithological Congress	Ottawa, Canada, June 1986	Fruit removal by birds in an eastern Mediterranean scrub as affected by fruit characteristics (with U. Safriel).
3)	The 8th Annual Meeting of the Prairie States Ecology Conclave	Louisville, Nebraska, May 1987	Why do migrating passerine birds eat fruits?
4)	The 13th Annual Meeting of the Guild of Rocky Mountain Population Biologists	Saratoga, Wyoming, September 1987	Seed-dispersal strategies among fruit-bearing plant dispersed by birds.
5)	Thermal Physiology Satellite Symposium of the XXXI International Congress of Physiological Sciences	Tromso, Norway, July 1989	Non-shivering thermogenesis and its ecological significance (with A. Haim).
6)	The 2nd Symposium of Frugivores and Seed Dispersal	Los Tuxtlas, Mexico, June 1991	The frugivorous nutrition of bulbuls ( <i>Pycnonotus xanthopygos</i> ).
7)	The 6th International Conference on Mediterranean Climate Ecosystems	Maleme, Crete, Greece, September 1991	The effect of burned pine trees on post-fire germination and establishment (with G. Ne'eman & H. Lahav).
			Removal of the green fruit of <i>Asparagus aphyllus</i> by birds - seed predation or dispersal? (with M. Adar & U. Safriel).
8)	The 5th International Conference on Environmental Quality and Ecosystem stability	Jerusalem, Israel, June 1992	Soil Microarthropods in post-fire pine forest on Mount Carmel, Israel (with M. Broza, D. Poliakov & S. Weber).
			Rodent populations recovering from fire in Mediterranean woodland (with A. Haim & O. Zohar).
9)	The 19th International	Beijing, China,	The aphid <i>Ctenocallis israelica</i> kills its host bush in a post-fire

	Congress of Entomology	June 1992	forest in Mt. Carmel, Israel (with M. Broza & H. Lahav).
10)	International Workshop on the Role of fire in Mediterranean Ecosystems	Banyuls-sur-mer, France, September 1992	Post-fire resilience of avifauna in east Mediterranean natural pine forest on Mount Carmel, Israel.
11)	SEB Annual Meeting	Canterbury, England, April 1993	Resilience to fire, the response of rodents to different management regimes (with A. Haim).
12)	Sixth International Theriological Congress	Sydney, Australia, July 1993	Comparative physiology of thermoregulation in rodents: adaptation to arid and mesic environment (with A Haim).
13)	South African Ornithological Society, 8th Thematic Symposium: Migration, Dispersal and Nomadism	Langabaan, South Africa, September 1993	Preliminary data on the importance of Israel for the conservation of the White pelican <i>Pelecanus onocrotalus</i> .
			Stopover and fat deposit by blackcaps <i>Sylvia atricapilla</i> following spring migration over the Sahara (with A. Maitav).
14)	The 2nd International Conference on Forest Fire Research	Coimbra, Portugal, November 1994	The effects of post-fire management on bird community succession in an East-Mediterranean natural pine forest on Mount Carmel, Israel (with M. Adar).
			Changes in the rodent community in pine woodland recovering from fire: The response to different management regimes (with A. Haim & A. Golan).
15)	10th International Bat Research Conference	Boston, U.S.A., August 1995	The fruit syndromes of the Egyptian fruit-bat <i>Rousettus aegyptiacus</i> in East-Mediterranean habitats (with C. Korine & Z. Arad).
			Food selection of the Egyptian fruit-bat <i>Rousettus aegyptiacus</i> in East-Mediterranean habitats (with C. Korine & Z. Arad).
16)	5th European Conference on Wildlife Telemetry	Strasbourg, France, August 1996	Migration of the Great White Pelican: the first satellite records (with M. Shmueli, Z. Arad & A.J.

			Crivelli).
17)	9th Pan-African Ornithological Congress	Accra, Ghana, December 1996	The energetic demands of the Great White Pelican during migration in Israel and its implication to the conflict between fish industry and pelicans (with M. Shmueli, Z. Arad & A.J. Crivelli).
18)	International Seminar: Migrating Birds Know No Boundaries	Jerusalem, Israel, September 1997	Pelican stop-over in Israel - is it a must? (with Z. Arad & M. Shmueli).
			Satellite tracking of wintering and migrating pelicans (with M. Shmueli, Z. Arad & A.J. Crivelli).
19)	International Workshop: Fire, Landscape and Dynamics in the Mediterranean Area	Banyuls-sur-Mer, France, September 1997	The relations between bird recovery and habitat structure after fire (with M. Arad).
			The response of a post fire forest habitat to mountain goat grazing (with A. Haim & A. Golan).
20)	VII International Congress of Ecology	Florence, Italy, July 1998	The role of amino acids and secondary compounds in fruits for animal-plant interactions in Mediterranean ecosystems.
21)	Medpine, International Workshop on Mediterranean Pines	Mt. Carmel, Israel, February 1999	Passerine birds in Mediterranean pine forests. (Invited Speaker)
			The effect of porcupine and bast scale on Aleppo pine recruitment after fire (with G. Ne'eman). (Invited Speaker)
22)	Eureco 99' - VIII European Ecological Congress - The European Dimension in Ecology	Halkidiki, Greece, September 1999	The effect of microhabitat on post-fire regeneration of soil seed banks in Aleppo pine forests (with G. Ne'eman).
23)	Waterbird Conservation and Management 23rd Annual Meeting and Workshops	Grado, Italy, November 1999	Comparative ontogenesis of Pygmy ( <i>Palacrocorax pygmeus</i> ) and Great ( <i>P. carbo</i> ) cormorants: morphometry and energetics (with M. Shmueli & Z. Arad).

			Prey detection and prey preference in diving cormorants (with T. Strod & Z. Arad).
			Behavioural and eco-physiological aspects of the Pygmy cormorant's biology (with M. Nathan, I. Zorovski, Z. Arad & G. Katzir).
24)	3rd International Symposium-Workshop on Frugivores and Seed Dispersal	Sao Pedro, Brazil, August 2000	The impact of the secondary metabolite emodin in <i>Rhamnus alaternus</i> fruits on fruit removal and seed predation (Invited Speaker)
			Secondary dispersers and the big unknown: Dynamics in the soil seed bank (with D.J. Levey & W.R. Silva). (Invited Speaker)
			Autumn migrants as the major dispersers of <i>Pistacia atlantica</i> - what determines the abundance of birds? (with N. Sapir & Z. Abramsky).
25)	5th International Conference on Cormorants- 2nd Meeting of Wetlands International Cormorant Research Group	Freising, Germany, December 2000	Turbid or not turbid - the cormorant's point of view (with T. Strod, G. Katzir & Z. Arad).
			Underwater visual acuity in the Great cormorant (with T. Strod, G. Katzir & Z. Arad).
26)	European Science Foundation, Scientific Program on Optimality in Bird Migration, Workshop on "Optimal bird migration - from theory to tests"	Wilhelmshaven Germany, December 2000	The significance of frugivory for passerine birds in an eastern Mediterranean scrubland at the desert edge (Invited Speaker)
27)	The 3rd European Vertebrate Pest Management Conference	Kibbutz Ma'ale Hachmisha, Israel, September 2001	Is the Egyptian fruit bat, <i>Rousettus aegyptiacus</i> , major agriculture pest in Israel? (with C. Korine & Z. Arad)

28)	Workshop: Optimality in Bird Migration	Lund, Sweden, February 2002	Stopover ecology of woodland autumn migratory passerines at a desert edge (with N. Sapir & Z. Abramsky)
29)	63rd Annual Meeting of the Association of Southeastern Biologists	Boone NC, U.S.A., April 2002	Seed chemistry of <i>Sophora chrysophylla</i> (mamane) in relation to the diet of the specialist seed predator <i>Loxioides bailleui</i> (palila) in Hawai'i (with M.L. Cipollini, P.C. Banko, G.W. Breton, E. Paulk & M. Wink).
30)	Symposium on: "Birds and Berries and Plant Secondary Metabolites: Frugivory, Detoxification and Utilisation"	Heidelberg, Germany, January 2003	Do secondary metabolites in fruits affect plant fitness? Experimental study on the effect of emodin (anthraquinone) on seed predation and seed removal in <i>Rhamnus alaternus</i> .  (Invited Speaker)
31)	6th World Conference on Birds of Prey and Owls	Budapest, Hungary, May 2003	The effect of land-use and environmental factors on foraging and feeding patterns of the Griffon Vulture in Northern Israel (with L. Court, Y. Carmel & O. Bahat)
32)	Association for Research in Vision and Ophthalmology ARVO2003	Fort Lauderdale, Florida, U.S.A., May 2003	Underwater visual acuity in Great Cormorants, <i>Phalacrocorax carbo sinensis</i> in clear and turbid water (with G. Katzir, T. Strod & Z. Arad)
33)	The 3rd International Wildlife Management Congress	Christchurch, New Zealand, December 2003	The effect of land-use and environmental factors on foraging and feeding patterns of the Griffon Vulture in Northern Israel (with L. Court, Y. Carmel & O. Bahat)
34)	10th International Behavioral Ecology Congress	Jyväskylä, Finland, July 2004	Intersexual difference in digestive constraints in sunbirds: Possible ecological implications (with S. Markman, H. Melamed & A. Arieli)
35)	47th Annual Symposium International Association of Vegetation Science	Kailua-Kona, Hawaii, July 2004	Are secondary compounds in nectar adaptive? (with H. Tadmor, N. Singaravelan, G. Ne`eman, S. Markman, A. Arieli & M. Inbar)
36)	2004 Meeting of the	Philadelphia,	First polar body pronuclear

	American Society for Reproductive Medicine	USA, October 2004	abnormal morphology can be related to low ovarian reserve in ICSI patients. (with J.S. Younis, O. Radin, N. Mirsky, S. Bar-Ami & M. Ben-Ami)
37)	Conference on : Migration in the life-history of birds	Wilhelmshaven Germany, February 2005	The feeding station in the Hula Valley, Israel, affects the Eurasian Crane ( <i>Grus grus</i> ) Eastern Europe Migration Route (with Y. Davidson & Y. Leshem)
38)	The Ramat Hanadiv Park Workshop: Active Management of Mediterranean Ecosystems	Ramat Hanadiv, Israel, April 2005	Birds of song as indicators to environmental conditions <b>(Invited Speaker)</b>
39)	The 4th International Frugivory and Seed Dispersal Symposium/Workshop	Brisbane, Australia, July 2005	The role of secondary metabolites in shaping and mediating pollination and seed dispersal (With colleagues) <b>(Invited Speaker)</b>
			The impact of environmental conditions on fruit nutritional value of a desert plant ( <i>Ochradenus baccatus</i> )(With A. Lotan)
			Can birds be ammonotelic? Nitrogen balance and excretion in fruit and nectar eating birds (With E. Tsahar, C. Martínez del Rio, Z. Arad)
40)	Conserving Biodiversity – Interdisciplinary Initiative to Reduce pan-European Cormorant-Fisheries Conflicts	Kfar Blom, Israel, January 2006	Bird Migration in Israel and the ecology of the Hula Valley <b>(Invited Speaker)</b>
41)	The 2 <sup>nd</sup> Scientific Congress of East Asian Federation of Ecological Societies	Niigata, Japan, March 2006	The role of secondary metabolites in shaping and mediating pollination and seed dispersal (With colleagues) <b>(Invited Speaker)</b>
42)	23 <sup>rd</sup> Annual Meeting of the European Society of Human Reproduction and Embryology	Lyon, France, July 2007	1) Earl follicular GnRH antagonist supplementation improves fertilization and embryo cleavage rates in IVF-ET GnRH antagonist cycles (with S. Soltsman et al.).

			2) First polar body development could predict clinical pregnancy rate in infertile women undergoing ICSI treatment (with O. Radin et al.)
43)	8 <sup>th</sup> International Congress of Neuroethology	Vancouver, Canada, July 2007	Underwater Vision in Cormorants (with G. Katzir, Z. Arad and T. Strod)
44)	17 <sup>th</sup> World Congress on Ultrasound in Obstetrics Gynecology	Florence, Italy, October 2007	Prenatal diagnosis of nuchal cord by different sonographic methods and its effect on neonatal outcome (with S. Gorunov, S. Haddad and M. Ben-Ami)
45)	4 <sup>th</sup> African Acarology Symposium	Hammamet, Tunisia, October 2007	Integrated control of the date palm spider mite (with A. Lotan et al.)
46)	The 24th Annual Meeting of the European Society of Human Reproduction and Embryology	Barcelona, Spain, July 2008	1) Nucleolar precursor bodies' morphology is better in the GnRH antagonist than the long GnRH agonist cycles (With Radin et al.) 2) Is low ovarian reserve in infertile women related to an underlying thrombophilia? (With Younis et al.)
47)	93rd ESA Annual Meeting	Milwaukee, Wisconsin, August 2008	Nicotine in nectar: Consumption and perception by honey bees and its effect on their survival (with O. Afik et al)
48)	Integrated Control of Plant Feeding Mites	Florence, Italy, March 2009	Biological control of the old world date mite, <i>Oligonychus afrasiaticus</i> , using indigenous predatory mites in the Southern Arava Valley of Israel (with A. Lotan A. and E. Palevsky)
49)	NDWR bi-national conference, New Developments in Water Research – perspectives	Haifa, Israel, March 2009	How does <i>Vibrio cholerae</i> get dispersed between water bodies? (with Y. Senderovich and M. Halpern)
50)	The 15 <sup>th</sup> Health Related Water Microbiology Symposium (IWA, International Water Association)	Naxos, Greece, June 2009	Migratory waterbirds are possible disseminators of <i>V. cholerae</i> within and between continents. (with M. Halpern and Y. Senderovich)
51)	25 <sup>th</sup> Annual Meeting of the	Neuchâtel,	1) Great tits overtake aphids'



	International Society of Chemical Ecology	Switzerland, August 2009	galls chemical defenses (with Koplovich, A., Lewinsohn E., Wink, M. and M. Inbar)  2) Nicotine in nectar: Consumption and perception by honey bees and its effect on their survival (with O. Afik et al)
52)	14 <sup>th</sup> International Conference on Production Diseases in Farm Animals	Ghent, Belgium, June 2010	Early prediction of the risk to develop sub-clinical BRD in newly received calves (with Eitam, H., Shabtay, A. et al.)
53)	The 13th International Symposium of Microbial Ecology (ISME 13)	Seattle, WA, USA, August 2010	1) Fish and waterbirds as reservoirs and vectors of <i>Vibrio cholerae</i> (with Senderovich, Y. and Izhaki, I.)  2) Plant's nectar as a bacterial habitat (With Fridman, S., Izhaki, I. and Gerchman, Y.)
54)	Annual Meeting of the Society for Integrative and Comparative Biology	Salt Lake City, UT, USA January 2011	Differential Responses of Two Species of Spiny Mouse to Glucosinolates in Sweet Mignonette Fruits (with M. Samuni, Z. Arad, D. Dearing)
55)	5th International Congress on Stress Response in Biology and Medicine	Quebec city, Canada, July 2011	Stress-related susceptibility to BRD in young calves (with Shabtay, A., Eitam, H. et al.)
56)	Cholera & other bacterial enteric infections, 46th Annual Joint Panel Meeting	Kolkata, India, December 2011	The role of fish and waterbirds in the global dissemination of <i>Vibrio cholerae</i> (with Y. Senderovich and M. Halpern)
57)	CIRCLE-2 , ERA-NET Climate Change & Forest Fires in the Mediterranean Basin: Risk Reduction & Management	Nir Etzion, Israel, January 2012	The effect of fire on the fauna of the Mediterranean basin: an overview and synthesis  <b>(Invited Speaker)</b>
58)	Annual Meeting of the Society for Integrative and Comparative Biology (SICB)	Charleston, South Carolina , USA January 2012	From a seed predator to a high-quality seed disperser: The tale of <i>Acomys cahirinus</i> and <i>Ochradenus baccatus</i> (with M. Samuni. Z. Arad and D. Dearing)
59)	Annual Meeting of Israeli Society for Microbiology (ISM).	Bar Ilan University, Israel February 2012	Honey bees affect bacterial communities in floral nectar (with Y. Gershtein and M. Halpern)

60)	The 14th International Symposium on Microbial Ecology	Copenhagen, Denmark August 2012	Honeybees govern bacterial communities' composition in floral nectar (with Y. Aizenberg-Gershtein, Y. and M. Halpern, M.)
61)	The 4th International Zoological Congress	Haifa, Israel September 2012	Fruit chemistry alters animal behavior. (with M. Samuni-Blank, M.D. Dearing, Y. Gerchman, B. Trabelcy, A. Lotan, W.H. Karasov and Z. Arad)
62)	2013 SICB Annual Meeting	San Francisco, CA USA January 2013	Divergent behavioral strategies in three congeneric rodents for dealing with fruit toxins (with M. Samuni et al.)
63)	The Association for Research in Vision and Ophthalmology Annual Meeting	Seattle, USA May 2013	Chromatic components in underwater targets do not affect Great cormorants? ( <i>Phalacrocorax carbo</i> ) visual resolution (with G. Katzir and R. Almog)
64)	The 12th Gordon Research Conference on Plant-Herbivore Interaction The Changing Face of Plant-Herbivore Studies	Ventura, California, USA February 2013	Taste of fruit toxins alters plant-animal interactions (with M. Samuni-Blank, Z. Arad, M.D. Dearing, Y. Gerchman, W.H. Karasov, B. Trabelcy and K.D. Kohl)
65)	Seed Ecology IV	Shenyang, China June 2013	Fruit chemistry promotes seed dispersal by mammals (with M. Samuni-Blank and A. Arad)
66)	15th International Conference on Production Diseases in Farm Animals.	Uppsala, Sweden June 2013	Effect of dietary supplemental pomegranate peels extract on cryptosporidiosis, diarrheal intensity and weight gain in neonatal calves. (with S. Weyl-Feinstein et al.)
67)	The 17th European Carbohydrate Symposium	Tel Aviv, Israel July 2013	Utilization of the glucosinolate-myrosinase "Mustard Bomb" system for reinforcement of seed dispersal behavior and the isolation and characterization of novel glucosilate (with M. Samuni-Blank, Y. Gerchman et al.)
68)	Botany 2013	New Orleans, USA July 2013	The effects of vegetative and floral damage on nectar alkaloid concentrations in Tree Tobacco ( <i>Nicotiana glauca</i> ) (with R. Kaczorowski, S. Markman et al.)

69)	XVI International Congress on Molecular Plant-Microbe Interactions	Rhodes, Greece July 2014	Do nicotine and honeybees manipulate bacterial community in floral nectar? (With M. Halpern and Y. Aizenberg-Gershtein)
70)	The Annual Meeting of the Association for Research in Vision and Ophthalmology	Orlando, FL USA July 2014	Chromatic components in underwater targets do not affect Great cormorants' ( <i>Phalacrocorax carbo</i> ) visual resolution (with G. Katzir and R. Almon).
71)	65th annual meeting of the European Federation of Animal Science	Copenhagen, Denmark August 2014	Monitoring the physiological and behavioral stress response of calves following pre-marketing mixing (with S. Weyl-Feinstein et al.)
72)	51st Annual Conference of the Animal Behavior Society	Princeton, USA August 2014	Target color components do not affect cormorants' underwater visual resolution (with G. Katzir, R. Almon )
73)	Glucosinolates and beyond	Wageningen, The Netherlands October 2014	The glucosinolates-myrosinase system in <i>Ochradenus baccatus</i> : Ecology, biochemistry and physiology (with Y. Gerchman, M. Samuni-Blank, B. Trabelsy and Z. Arad).
74)	Great White Pelican migration over Israel: Management of ecological demands and conflicts with inland fisheries	Kfar Blum, Israel October 2014	Eco-physiological research in the service of wetland conservation and in conflict solutions: Insights from pelican studies in Israel (with Z. Arad and M. Shmueli)
75)	9 <sup>th</sup> Symposium on the Lacertids of the Mediterranean Basin	Lemassol, Cyprus June 2016	History does matter: the Importance of anthropogenic disturbances in habitat use of the endangered <i>Lacerta media israelica</i> (with R. Talbi)
76)	XI International Symposium on Pollination	Berlin, Germany April 2018	Endogenous and exogenous factors determining microbial community composition in floral nectar (with M. Halpern)
77)	10th Symposium on the Lacertids of the Mediterranean Basin & 2nd Symposium on Mediterranean Lizards	Tel Aviv Israel June 2018	The impact of Cattle Egret on lizard community structures in Mediterranean woodlands )with R. Talby and A. Bar-Massada)

**B. Local Conferences** – Since 1988 I presented many papers in local conferences, mainly in the Annual Meetings of the Zoological Society of Israel and in the Annual Meeting of Israel Society for Ecology and Environmental Quality Sciences.

## **7. Colloquium Talks and Other Invited Addresses**

1)	"Factors affecting fruit removal by birds, number of dispersing species and presence of fruit-bearing plants in an eastern Mediterranean scrub". Department of Wildlife Ecology, University of Wisconsin-Madison, December 1985 (Prof. W. H. Karasov, host).
2)	"Two aspects of seed dispersal by birds: nutrition and germination". Division of Biology, Kansas State University, Manhattan, Kansas, November 1987 (Prof. C. C. Smith, host).
3)	"The role of secondary compounds in fruit selection by birds". Department of Zoology, The Hebrew University of Jerusalem, Jerusalem, March 1991 (Prof. J. Marder, host).
4)	"Post-fire habitat management – zoological implications". The Mitrani Center for Desert Ecology, Ben-Gurion University of the Negev, Sede Boqer, November 1993 (Y. Lubin, B. Pinshow, hosts).
5)	"The role of frugivorous birds in shaping fruit characteristics in east Mediterranean habitats". Department of Evolution, Ecology and Systematics, The Hebrew University of Jerusalem, Jerusalem, June 1994 (Prof. J. Heller, host).
6)	"Ecology and ecophysiology of the Great White Pelican towards a solution to the conflict between preservation of an endangered species and damages to fishery in Israel". Department of Zoology, University of Florida, Gainesville, Florida, September 1995 (Prof. D. Levey, host).
7)	"How nutritional attributes of fleshy fruits govern fruit removal by birds?". Department of Plant Sciences, Tel Aviv University, February 2001 (Dr. Shaul Yalovsky, host).
	"The role of secondary metabolites in plant-bird interactions". Department of Zoology, Tel Aviv University, February 2003 (Dr. Yoav Gothif, host).
8)	"The adaptive role of secondary metabolites in fleshy fruited-plants in shaping plant-disperser interactions". The Department of Evolution, Systematics and Ecology, The Hebrew University of Jerusalem, April 2003 (Dr. Guy Bloch, host).
9)	"The role of secondary metabolites in pollination and seed dispersal". Institute of Plant Sciences, Volcani Center, November 2006 (Dr. Oz Barazani, host).
10)	"Seed dispersal versus pollination: Toxicity point of view". The Department of Evolution, Systematics and Ecology, The Hebrew University of Jerusalem, November 2008 (Prof. Yossi Heller, host).

## 8. Scholarships, Awards, Research Grants, etc. from external sources

Foundation	Title of Grant Proposal	Total Budget	Period
The Hoopoe Foundation	Determination of trace elements in vultures ( <i>Gyps fulvus</i> ) feathers	25,000 NIS	2017-2018
Nekodat Chen	Sustainable grazing (with I. Schoenbaum, Z. Henkin)	20,000	2016
The Israel Academy of Sciences and Humanities – Israel Science Foundation (ISF) - Institutional Equipment	Controlled Environment Systems for a new Transgenic and Quarantine Greenhouse Research (TQGR) Facilities (with T. Fahima and M. Inbar)	500,000 NIS	
The Israel Academy of Sciences and Humanities – Israel Science Foundation (ISF)	Gut microbiome of nectarivorous birds in relation to nectar microbiome and secondary metabolites: ecological and evolutionary perspectives (with M. Halpern)	168,000 \$US	2016-2019
The Hoopoe Foundation	Determination of trace elements in vultures ( <i>Gyps fulvus</i> ) feathers	25,000 NIS	2016-2017
Israel Ministry of Environmental Protection	Assessment of ecosystem services and human wellbeing in Mount Carmel Biosphere Reserve	700,000 NIS	2016-2018
Ministry of Agriculture	The interaction between an agricultural grazing system and the ecological Mediterranean grassland system: a multidisciplinary project (with Z. Henkin et al.)	450,000 NIS	2015-2017
Jewish National Fund	The role of forest management on passerine birds	324,000 NIS	2014-2017
The Israel Nature and Parks Authority	The nest ecology of Jordan sparrows in the Dead Sea Area	170,000 NIS	2014-2017
The Deutsche Bundesstiftung Umwelt (DBU)	The Druze Community, Local Government, and the Carmel Biosphere Reserve, Israel: from conflict to involvement throughout environmental education for establishing "green" small and medium businesses (with I. Beeri & T. Eshet)	125,000 EUR	2013-2016
Addax and Oryx Foundation	Israel-Palestine: The birds of peace	114,000 \$US	2013-2015
Jewish National Fund	Habitat selection of the Collared Pratincole ( <i>Glareola pratincola</i> ) in the	75,000 NIS	2013-2015

	Hula Valley, Israel		
The Hoopoe Foundation	Habitat selection of the Collared Pratincole ( <i>Glareola pratincola</i> ) in the Hula Valley, Israel	27,500 NIS	2013-2014
The Israel Academy of Sciences and Humanities – Israel Science Foundation (ISF)	Bacterial community composition and diversity in floral nectar: The roles of environmental <i>versus</i> spatial factors along climatic gradient and across the globe	232,000 \$US	2012-2016
The Hoopoe Foundation	The effect of invasive birds on the breeding of native cavity-breeding birds	60,000 NIS	2012-2013
The Hoopoe Foundation	Environmental changes and their effects on population distribution in the Arabian babbler ( <i>Turdoides squamiceps</i> ).	60,000 NIS	2012-2013
Israel Ministry of Environmental Protection	The Druze Community, Local Government, and the Carmel Biosphere Reserve, Israel: from conflict to involvement throughout small and medium businesses (with I. Beeri & T. Eshet)	150,000 NIS	2012-2015
USAID-MERC	Development of a novel glucosinolate-containing desert plant ( <i>Ochradenus baccatus</i> ) for control of soil-borne diseases in the Middle East (with participants from Jordan and Palestinian Authority)	600,000 \$US	2010-2014
Israeli Ministry of Science (MOP)	Development of the desert plant ( <i>Ochradenus baccatus</i> ) for control of soil-borne diseases in the Middle East (with Y. Gerchman, R. Cohen, Y. Oka, & R. Aharon)	90,000 \$US	2009-2012
The Israel Academy of Sciences and Humanities – Israel Science Foundation (ISF)	The role of secondary metabolites in floral nectar in mediating the interactions between plants and microorganisms (With Malka Halpern, G. Ne'eman & Y. Gershman)	212,000 \$US	2008-2012
The United States - Israel Binational Science Foundation (BSF)	The ecophysiological response of birds versus mammals to secondary metabolites in fruits (with Profs. W. Karasov, Z. Arad. D. Dearing)	180,000 \$US	2007-2011
European Commission, COST action	Intercafe: Conserving biodiversity - interdisciplinary initiative to reduce pan-European cormorant-fisheries conflicts (with participants from 26 European countries)	320,000 EUR	2004-2008

The Israel Academy of Sciences and Humanities – Israel Science Foundation (ISF)	Research grant: The ecological role of secondary compounds in floral nectar of the tree- tobacco ( <i>Nicotinana glauca</i> ) (with Dr. M. Inbar and Dr. G. Ne'eman)	172,000 \$US	2003-2007
International Arid Lands Consortium	Research grant: Fleshy-fruited plants and frugivores in desert ecosystems (With Prof. J. Bronstein and Dr. R. Nathan)	99,924 \$US	2003-2006
Planning & Budgeting Committee/ Council of Higher Education	Research equipment: SpeedVac & Lyophilizer	14,750 \$US	2003
European Commission, Concerted Actions	Research grant: Reducing the conflict between cormorants and fisheries on a Pan-European scale: Sustainable fisheries and aquaculture (with participants from 11 European countries)	400,000 EUR	2000-2002
KKL – Jewish National Fund	Organizing of Medpine, Mediterranean Pine International Workshop (with Dr. G. Ne'eman)	13,000 \$US	1999
Israeli Ministry of Science	Research grant: The study of behavioral, ecological and physiological aspects of feeding in fish eating birds, and the development of means to prevent damage to fish ponds in Beit Shaan (with Prof. Z. Arad, Dr. G. Katzir, Prof. D. Weihs)	360,000 NIS	1996-1999
The Natural History Museum, Basel, Switzerland	Research grant: Migration of the Great White Pelican in the Palearctic (with Dr. A.J. Crivelli)	34,000 FF	1996
The joint German Israeli Research Program	Research grant: Resilience via succession of a semi-arid Mediterranean Aleppo pine forest ecosystem to fire on Mt. Carmel, Israel" (with colleagues from Oranim, Tel-Aviv University and Volcani Center)	333,317 DM	1993-1997
The Nature Reserve Authority in Israel and The Department of Fisheries - Ministry of Agriculture	Research grant: The damages of the Great White Pelican to fishery in Israel	21,000 NIS	1993
Israel Ministry of the Environment, Carmel Foundation	Research grant: The recovery of the pine forest on Mt. Carmel after fire (with Prof. A. Haim, Drs. M. Broza and G. Ne'eman)	260,000 NIS	1990-1993
Division of Biology, Kansas State University	Postdoctoral Fellowship	15,000 \$US	1986-1987
Israel Science	Seed dispersal in east Mediterranean	90,000	1983-1985

Foundation	scrubland (to Prof. Uriel Safriel for Izhaki's Ph.D. thesis)	NIS	
Fund for the Encouragement of Research "Histadrut" The General Federation of Labor in Israel	Research grant: Seed dispersal in eastern Mediterranean scrubland	10,000 NIS	1983

In addition to the above, in the last 10 years I also received (1) 3 grants from the Technion-University of Haifa Foundation (a total of \$22,500), (2) various grants from Haifa University - Research Authority (a total of 33,000 NIS)



## 9. Teaching

### A. Courses taught in recent years:

	Title	Year	Type	Level
1)	Biostatistics	1988 - Present	Lecture + Computer	B.Sc.
2)	Ecology	1991 - 1992	Lecture (Technion)	B.Sc.
3)	Ecology 1	1996 - Present	Lecture	B.Sc.
4)	Ecology 2	1996 - 2007	Lab.	B.Sc.
5)	Population Ecology	1996 - Present	Lecture + Computer	B.Sc.
6)	Methods in Quantitative Ecology	1997 - Present	Lecture + Computer	B.Sc.
7)	Statistics for Environmental Studies	1998 - 1999	Lecture (Haifa University)	M.A.
8)	The Ecology of Global Climate Changes	1999 - 2001	Lecture (Haifa University)	M.A.
9)	Experimental Design	2001 - Present	Lecture + Computer (Haifa University)	M.Sc.
10)	Population Ecology	2001 - Present	Lecture + Computer (Haifa University)	M.Sc.

### B. Supervision of graduate students in recent years:

Student's Name	Title of Thesis/ Dissertation	Degree	Date	Forum of Publication
				See in the List of Publications:
Menachem Adar (with U. Safriel)	The relationships between <i>Asparagus aphyllus</i> and it's dispersing birds	M.Sc.	Sep. 1991	E.2
Marva Shmueli (with Z. Arad)	Ecophysiology of the Great White Pelican ( <i>Pelecanus onocrotalus</i> ) as a basis for solving damaging to fisheries	M.Sc.	Nov. 1996	C.43, C.44, C.48, E.8, E.9, E.11, F.8, H.11, H.14, H.17, H.19, J.1, J.6
Nir Sapir (with Z. Abramsky)	Stopover ecology of autumn migratory passerines in a man-made wood at desert edge	M.Sc.	Dec. 2001	C.60, J.7
Ella Tsahar (with Y. Friedman)	The role of secondary metabolites in seed dispersal	M.Sc.	June 2001	C.51, C.52, C.54, H.22
Hagar Melamed (with A. Arieli)	The role of secondary metabolites in <i>Nicotiana</i>	M.Sc.	Sep. 2004	C.61, J.3

	<i>glauca</i> 's nectar for its legitimate and non-legitimate pollinator			
Yifat Davidson (with Y. Leshem)	Examination of crane-agriculture management model in the Hula Valley	M.Sc.	Oct. 2004	
Ofir Altstein (with R. Nathan)	Seed dispersal by frugivorous birds in desert ecosystems	M.Sc.	Oct. 2004	
Naama Lindman (with N. Beker)	Bioeconomic aspects of the crane-man conflict in the Hulla Valley	M.A.	Nov. 2004	
Lia Court (with Y. Carmel and O. Bahat)	Foraging behavior of vultures <i>Gyps fulvus</i>	M.A.	Nov. 2004	
Rivka Lester	The effect of ants on seed dispersal and predation in different successional stages of <i>Pinus halepensis</i> forest	M.Sc.	Nov. 2005	C.90
Alon Lotan	The role of abiotic conditions on the nutritional value of fruits of <i>Ochradenus baccatus</i>	M.Sc.	Nov. 2005	C.118
Esther Lachman (with J. Heller and Z. Arad)	Population dynamics and ecophysiology of land snails following wildfire in a Mediterranean habitat	Ph.D.	Feb. 2007	
Ella Tsahar (with Z. Arad and C. Martinez del-Rio)	Protein balance in birds: physiological mechanisms and ecological consequences	Ph.D.	Jan. 2007	C.62, C.63, C.66, C.67, C.68, C.73, J.2
Rachel Schwartz-Tzachor (with A. Perevolotski)	Butterflies as bioindicators	Ph.D.	Jan. 2007	C.78
Micha Oestereich (with G. Katzir)	The effect of climate change on the arrival dates of autumn and spring migrants in a stopover site	M.Sc.	Jan. 2007	
Noam Cohen (with M. Inbar)	The effect of secondary metabolites on ants	M.Sc.	Jan. 2007	
Yuval Shimrat (with A. Dafni & Y. Sapir)	The effect of habitat size on pollination services and reproductive success in rare plant species- <i>Iris atropurpurea</i> in Israel's coastal plain as a case study endangered plant	M.Sc.	Nov. 2008	

Avi Koplovich (with M. Inbar)	The effect of secondary metabolites in galls on the great tit ( <i>Parus major</i> )	M.Sc.	Dec. 2009	
Harel Eitam (with A. Shabtai)	Monitoring stress situations in cattle	Ph.D.	March 2012	C.82, C.83, C.87, C.102, C.111
Alon Lotan (with A. Palevsky)	The ecology of the old world date mite <i>Oligonychus afrasiaticus</i> and its integrated control using indigenous predatory mites	Ph.D.	Nov. 2010	
Motti Charter (with Y. Leshem)	Interspecific interactions between sympatric breeding birds: the effects of predation and competition	Ph.D.	Nov. 2010	C.69, C.70, C.71, C.72, C.77, C.81, C.84, C.88, C.93, C.96, C.100, C.101
Rotem Yaakov (with A. Haim)	Ecophysiology of the <i>Capra hircus cretica</i> under abiotic stress	M.Sc.	Oct. 2010	
Sveltlana Fridman (with M. Halpern)	Microorganisms and secondary metabolites in floral nectar	M.Sc.	Nov. 2010	C. 108, C.116, C.117
Itamar Lupo (with M. Inbar)	Aposematic coloration in plants	M.Sc.	Nov. 2010	
Michal Samuni (with Z. Arad)	The ecophysiological impact of secondary metabolites in fruits	Ph.D.	Dec. 2012	C.110, C.112, C.125
Achik Dorchin (with A. Dafni)	Bee diversity and pollination in fragmented ecosystem	Ph.D.	Feb, 2014	C.118
Yana Gershtein (with M. Halpern)	The role of microorganisms and secondary metabolites in floral nectar	Ph.D.	Current	C.119, C.124, C.139, C.147, H.33
Yael Horoszowski-Fridman (with B. Rinkevich)	Ecological implications of marine silviculture	Ph.D.	Current	C.105
Sara Weyl (with A. Shabtai)	The Potential of Pomegranate peels (an agricultural by-product) to diminish morbidity in calves	Ph.D.	March 2015	C.131, C.132, H.34
Guilad Friedemann (with Y. Leshem, Tel-Aviv U.)	Competition mechanism of raptor species under strong ecological stress	Ph.D.	Jan. 2018	C.128, C.152, C.160
Yael Horesh	Behavioural, demographic	Ph.D.	Current	

	and physiological aspects of a critically declining population – the case of the Griffon Vulture <i>Gyps fulvus</i> in Israel			
Uzi Dagan	The effect of oaks on the community of reptiles and amphibians in "Ramat Menasha" biosphere reserve	M.Sc.	Dec. 2014	
Yael Hartmayer	The Common Myna ( <i>Acridotheres tristis</i> ) as a successful invader: Intra and interspecific interactions, urbanization and public opinion	M.Sc.	Dec. 2014	
Sigalit Nir (With Y. Leshem, U. Tel Aviv)	Breeding success of <i>Tyto alba</i> in agricultural areas in Northern Israel	M.Sc.	Apr. 2016	
Liraz Cabra	Habitats selection of the Collared Pratincole ( <i>Glareola pratincola</i> ) in the Hula Valley	M.Sc.	Apr. 2016	
Asaf Ben David (With T. Dayan, U. Tel-Aviv)	The effect of <i>Pinus halepensis</i> spreading on nest predation	M.Sc.	Mar. 2017	
Hilla Fishov (With Amit Lerner)	Light pollution in ocean from infrastructure installations and its effect on zooplankton distribution and melatonin release	M.Sc.	Dec. 2017	
Lior Hasid	The effect of agricultural grazing on the reptile diversity and community structure	M.Sc.	Mar. 2018	
Heba Abutayeh (With Y. Gerchman and H. Azaizeh)	Olive mill solid waste to ethanol production – exploration of pretreatment and search for better environmental yeast	Ph.D.	Current	
Uzi Dagan	The effect of forest management on bird communities	Ph.D.	Current	
Orna Raviv (With Shiri Shamir and Alon Lotan)	Economic valuation of ecosystem services in Mount Carmel Biosphere Reserve	Ph.D.	Current	
Beny Trabelsy (With Y. Gerchman)	The effects of glucosinolates on seed dispersal in <i>Ochradenus baccatus</i> .	Ph.D.	Current	

Nimrod Shteindel (With Y. Gerchman)	Nitric oxide, a microbial kairomone	Ph.D.	Current	
Amir Arnon (with D. Malkinson)		Ph.D.	Current	

<b>Supervision of post-doc students:</b>			
Dr. Shai Markman	The effect of secondary metabolites on sunbirds	2002-2003	C.61, C.66
Dr. Natarajan Singaravelan	The adaptive role of secondary metabolites in nectar	2003-2005	C.64, C.65
Dr. Ella Tsahar	The ecological history of domestic livestock management in the southern Levant and its impact on Mediterranean landscape	2007-2008	C.85
Dr. Ohad Afik	The effect of nicotine on honeybees	2007-2008	
Dr. Motti Charter	Raptors in the service of agriculture	2011-	C.103, C.114, C.122

## 10. Miscellaneous

### Membership in Professional Societies:

1. The Ecological Society of America
2. The Israel Society for Ecology and Environmental Sciences
3. The Israel Zoological Society
4. ISOMED International Society for Mediterranean Ecosystems.
5. The Botanical Society of America.

## II. PUBLICATIONS

### A. Ph.D. Dissertation

Seed Dispersal by Birds in an Eastern Mediterranean Scrub.

(in Hebrew), 169 pp.

Date: May 1987

Department of Zoology, The Hebrew University of Jerusalem.

Supervisor: Prof. Uriel N. Safriel.

The thesis was published in three papers, Nos. C.1, C.2, C.3, D.6 in the list of publications and abstract No. 1.

### B. Books

### C. Articles in Refereed Journals

**In most papers, the first author made the largest contribution, than the last author (usually the head of the research group) and the other authors appear in order of their relative contribution.**

#### Published

1. Izhaki, I. and Safriel, U.N. 1985. Why do fleshy-fruit plants of the Mediterranean scrub intercept fall- but not spring-passage of seed- dispersing migratory birds? **Oecologia** (Berlin) 67: 40-43.
2. Izhaki, I. and Safriel, U.N. 1989. Why are there so few exclusive frugivorous birds? Experiments on fruit digestibility. **Oikos** 54: 23-32.
3. Izhaki, I. and Safriel, U.N. 1990. Weight losses due to exclusive fruit diet - interpretation and evolutionary implications: a reply to Mack and Seding. **Oikos** 57: 140-142.
4. Izhaki, I. and Safriel, U.N. 1990. The effect of some scrubland frugivores upon germination patterns. **Journal of Ecology** 78: 56-65.
5. Izhaki, I., Walton, P. and Safriel, U.N. 1991. Seed shadows generated by frugivorous birds in an eastern Mediterranean scrub. **Journal of Ecology** 79: 579-590.
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33. Aizenberg-Gershtein, Y., Izhaki, I. and Halpern, M. 2012. Honey bees affect bacterial communities in floral nectar. The Annual Meeting of the Israeli Society for Microbiology (ISM), Bar-Ilan University, Ramat-Gan, Israel, p. 56.
34. Weyl Feinstein S, . Marcovics ,A., Eitam H., Yishay M., Orlov A., Agmon R., Izhaki I. and Shabtay A. 2013. Effect of dietary supplemental pomegranate peels extract on cryptosporidiosis, diarrheal intensity and weight gain in neonatal calves. 15th International Conference on Production Diseases in Farm Animals. Page 102.

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## **I. Other Works and Activities Connected with your Scholarly Field**

### **Organizing International Workshops**

1. 6th International Meeting of "Rodents & Spatium" (The Rodent & Its Environment), 3-8 May 1998, Acre, Israel. The goal of the conference was to discuss various issues in population dynamics, evolution, biodiversity, ecophysiology, conservation and management of rodents (with A. Haim).

2. MEDPINE, Mediterranean Pine International Workshop, 7-12 February 1999, Mt. Carmel, Israel. The aim of the workshop was to bring together scientists from different countries working on various aspects of natural and managed pine forest ecosystems in the Mediterranean basin, to present the advances in research and to promote collaborations. (with G. Ne'eman).

<http://www.macam98.ac.il/~gidi//MEDPINE1.html>

#### **J. Articles, Books or other Works Submitted for Publication**

1. Lotan, A. and Izhaki, I. Could the abiotic environment shape fleshy fruit traits? A study of the desert shrub *Ochradenus baccatus*. Submitted to **Ecology**.
2. Younis, J.S., Radin, O., Mirsky, N., Izhaki, I., Majara, T., Bar-Ami, S., Ben-Ami, M. Abnormal development of the first polar body and the nucleolar precursor bodies is related to low ovarian reserve in ICSI patients. Submitted to **Human Reproduction**.
3. Shmueli, M., Arad, Z., Katzir, G., Shy, E., Goren, M. and Izhaki, I. Is sexual size dimorphism related to diet segregation in piscivorous Great White Pelicans and Great Cormorants? Submitted to **Israel Journal of Ecology & Evolution**.
4. Lev-Yadun, S., Ne'eman, G. and Izhaki, I. Certain unripe red fruits may be aposematic. Submitted to **Journal of Theoretical Biology**.
5. Shmueli, M., Izhaki, I., Katzir, G. and Arad, Z. Comparative energy requirements during ontogenesis of the Pygmy Cormorant (*Phalacrocorax pygmeus*) and the Great Cormorant (*P. carbo sinensis*). Submitted to **Journal of Avian Biology**.

#### **K. Additional Comments and Information on your Scientific Activity and Research Plans**

##### **(1) Cited papers**

The total number of times my papers have been cited – **896**

(Based on ISI Web of Knowledge, August 2008)

##### **(2) Research Interests and achievements:**

My personal research interests are centered on animal-plant interactions in the east Mediterranean ecosystems. Most of my work has focused on frugivory with an emphasis on mechanisms by which frugivorous birds affect the fitness of fruit-bearing plants and by which plants affect birds' fitness. Within this research framework, I studied the role of frugivorous birds in seed dispersal, the importance of fruit diet for resident and migrating birds, the role of amino acid profile of fruits

in fruit selection by birds and the effect of birds and mammals (rabbits, gazelles, fruit-bats) on seed dispersal and germination.

Over the past six years I have focused mainly on the role of secondary metabolites in fruits on seed dispersal and plant fitness. My central hypothesis is that secondary metabolites are mediators of the interactions between plants and frugivores. In a pioneering study we showed that some secondary metabolites in fruit have an ecological role, preventing seed predation by invertebrates and microbes without decreasing fruit removal by avian dispersers. Furthermore, we found that some secondary metabolites are retained in the ripe fruits because they have direct nutritional benefits to the frugivores that consume them. This study also provided a major insight into the chemical multi-functionality in plant secondary metabolites which I recently reviewed (New Phytologist 2002). I was invited to present the state of the art in this field in The 4<sup>th</sup> International Frugivory and Seed Disposal Symposium (to be held in 2005). My next step in this research direction includes a multidisciplinary project to determine the effect of environmental abiotic conditions on fruit chemical composition and consequently frugivory and seed dispersal in arid land (this project has been funded in 2003 by IALC for 2.5 years).

More recently I expanded this research approach to cover animal-pollinated plants. The central hypothesis of our ongoing study (funded in 2003 by the ISF for 4 years) is that the interactions between plants and nectar consumers (legitimate pollinators as well as nectar robbers) are mediated by secondary metabolites in the nectar. Consequently, the levels of secondary metabolites in the nectar should be inducible and animal-sensitive, with differential effects on pollinators versus non-pollinators. This study will be the first to empirically examine several hypotheses with regard to the adaptive role of secondary metabolites in nectar (see publication # C. 62).

My second research avenue is wildlife nutritional ecology involves fish-eating birds and is aimed to solve the conflict between fishery and piscivorous, potentially damaging birds. In this project we studied the energy demands of the great white pelican and cormorants and their impact on fish-yield in fishponds in Israel. One of our major finds was that feeding in Israel is crucial for the survival of the great pelicans and therefore we established a management policy which includes feeding

stations to conserve this endangered migratory species. This management tool has been successfully implemented in recent years. We were also the first to track the Europe-Africa migratory routes of pelicans using satellite tracking. An important achievement of our study was the first experimental behavioral evidence of visual resolution under amphibious conditions including low-level turbidity in any pursuit diving bird, the great cormorant (publication # C.58).

In addition to the above I am interested in fire ecology, especially the post-fire resilience of animals in pine forests. A large scale fire in Mount Carmel in 1989 initiated a major research effort to establish a practical tool to enhance plant and animal post-fire resilience. My study provided the first evidence of the long-term effect of fire on the avifauna in east Mediterranean pine forest.