Foreword

We all deeply believe that a nation and a country that do not unravel and learn their history have no future. Yet, many of us incline to identify history with archeology, battles, religious institutions, and much less so with the people that have lived along the different periods, the landscape, and the flora and fauna. I must admit I suffered too from this relatively narrow view. A recent visit to the natural history collections - botanical, zoological and anthropological - of Tel Aviv University has changed my view completely, and in ways far broader than just the historical-national ones: I have gained a new insight into my own profession – biology. My hosts opened to me a new window not only to the history of my own country, but also into an exciting world that looks into biological sciences from a completely different perspective than the biomedical approach I have grown up on. While I was aware of the importance of a whole organism approach to understanding the biosphere upon whose functions depends our very existence, it was a remote understanding that drowned in the tsunami of the molecular revolution, that can provide insight and solve problems, but up to a certain organizational level. In order to elucidate patterns and processes in higher and highly complex organizational levels in nature, we need an organism-based and environmental scientific approach.

Recording and studying the natural history of Israel as is being done by the dedicated teams in Tel Aviv University is an extremely important endeavor that should be promoted. I feel strongly that urgent measures should be taken in order to develop our basic knowledge of the biodiversity of Israel. As I stressed, the subject is important because of its historical value to understanding the development of Israel – its people, agriculture, fauna, and flora, much as archeology. Yet, it is equally if not more important for practical purposes – it has broad implications to areas such as modern agriculture, biological pest and fungal control, and environmental conservation. I hope that the support of the Israeli Academy of Sciences and Humanities, the Planning and Grants Committee of the Higher Education in Israel, and that of the Ministries of Environmental Protection, Agriculture and Rural Development, Tourism, and Science, heralds a revolution that will allow this important research area to regain its place in the mainstream of science, where it belongs, re-balancing many years of unfortunate neglect. Support of this national project is an important investment in the State of Israel, its science, culture, and economy.

I wish you much success in this endeavor

Sincerely

Aaron Ciechanover
December 23, 2008

Dear friends and colleagues,

We are pleased to present you with the 6th Annual Report of the National Collections of Natural History at Tel Aviv University.

In the past year we continued with our collecting, research, and public education activities, with many projects within Israel and abroad. This progress was made possible by the ongoing support of Tel Aviv University, bolstered in recent years by a maintenance budget provided by Vatat, the Planning and Grants Committee of the Council of Higher Education of Israel, and now also of the Ministry of Science, Culture and Sports, as a Knowledge Center. This support is crucial for the collections, and our success is monitored by the Israel Academy of Sciences and Humanities, which views the natural history collections of Tel Aviv University as a national level project. The Academy has also recommended that taxonomy be a priority for VATAT-funded Bikura post-doctoral fellowships provided by the Israel Science Foundation, and we are very hopeful that this step helps save this crucial and basic field of scientific research. The State of Israel is committed to doing so in the Convention of Biological Diversity.

National level support has enabled us to maintain our collections and to provide services to a large number of scientists and organizations within Israel and abroad. National level support for our new building, provided by VATAT and the Ministries of Environmental Protection, Agriculture and Rural Development, and Tourism, will ensure a safe future for this scientific and cultural treasure and will allow us to share our scientific treasures knowledge with the public. We are very grateful to many wonderful people who have helped us attain this goal, and look forward to continued work with them to promote basic biodiversity research in Israel.

This report presents you with the scope of our activities, of which we take great pride.

Tamar Dayan
Director, National Collections of Natural History
Table of contents

- Introduction ........................................................................................................... 4
- International Scientific Advisory Board .............................................................. 8
- Nature Campus Steering Committee ................................................................. 10
- Nature Campus Science Committee ................................................................. 12
- Museum faculty and staff (curators, associate curators, technical assistants) .... 14
- Public programs - Nature Campus ................................................................. 18
- Progress at the natural history collections: ....................................................... 20
  - Collections news – A word from our collections managers .......................... 21
  - Collecting trips and expeditions ..................................................................... 38
  - New collections ............................................................................................... 50
- Chapters in the history of the National Collections of Natural History of Tel Aviv University - Jehoshua Kugler (1916-2007) .......................................................... 52
  - Hanan (Hans) Bytinski-Salz (1903-1986) – Second Addendum ...................... 60
  - Heinrich Mendelssohn (1910-2002) – Addendum to his bibliography .............. 61
- Acknowledgments ............................................................................................... 62
- Publications .......................................................................................................... 68
- Graduate students ............................................................................................... 92
- Fellowships and grants ....................................................................................... 102
- Awards ................................................................................................................ 108
- Public service ..................................................................................................... 110
- Visiting scientists at the National Collections .................................................. 122
- Support for academic and other courses .......................................................... 124
- Support for various individuals and organizations ........................................... 126
Introduction

We are pleased to present the sixth in our series of Annual Reports of the National Collections of Natural History at Tel Aviv University. It details research, teaching, conservation, and public activities of the faculty, staff, and graduate students of the National Collections of Natural History at Tel Aviv University during the 2007/2008 academic year.

The National Collections of Natural History at Tel Aviv University provide an active, updated, and comprehensive record of the biodiversity of our region and a significant research infrastructure for scientists worldwide. The collections comprise millions of herbarium and natural history specimens that record the biodiversity of our region in the past century, as well as the evolution and history of humankind.

Because the State of Israel has no museum of natural history, indeed there is no such museum in the entire region, our collections are of particular significance. Tel Aviv University has made a huge investment in them over the years, resulting in an important national level research infrastructure, crucial for biodiversity-based scientific research. Key to the future and success of this project is the staunch support of the former Chair of the Board of Governors of Tel Aviv University, Mr. Michael Steinhardt, and Judy Steinhardt.

The collections have been declared a national level project by the Israel Academy of Sciences and Humanities and a Knowledge Center by the Ministry of Science, Culture, and Sports. They enjoy the special support of the Planning and Grants Committee of the Council of Higher Education (VATAT), the Ministry of Environmental Protection, the Ministry of Agriculture and Rural Development, the Ministry of Tourism, and the Ministry of Science, Culture, and Sports.
We, in turn, do our best to serve Israeli society. We lend support to many agricultural, environmental, ecological, evolutionary, and conservation studies of scientists in various institutions of higher education in Israel and abroad as well as government ministries in Israel. This year with the generous support of VATAT we were able to hire experts for our bee collection, a crucial resource for agriculture in view of the Colony Collapse Disorder; for our ant collection, which increasingly supports our understanding of patterns of species invasions; and for our parasitic wasp collection, key for biological control. Two VATAT funded post-docs have trained with us this past year and increased their knowledge as well as ours on spiders and tunicates. Additionally a VATAT funded expert has been studying with us the role of mollusks in the culture of ancient human civilizations. We continue to provide identifications and biological knowledge of exotic species that are detected by the authorities and to help monitor the eastern Mediterranean and Gulf of Elat. We continue to absorb aliya and our newest recruit, Dr. Silvia Blumenfeld, has just received a Giladi Fellowship to curate our National Lower Plants herbarium. Silvia and six other colleagues from the former USSR have contributed enormously to our collections and to science in Israel. Next year we also expect Dr. Shai Meiri who recently received an Alon Fellowship to join our ranks as Curator of Higher Vertebrates.

Nature Campus continues to uphold a longstanding Tel Aviv University tradition of service to public and school education. The education and public activities of Nature Campus take advantage of Tel Aviv University's unique research infrastructure, the I. Meier Segals Zoological Garden, the Botanic Gardens, and the teaching laboratories, and open the treasures of the National Collections of Natural History at Tel Aviv University to the public eye. This year Nature Campus has made huge strides in developing Hebrew language web-sites on natural resources, ecosystem services, and sustainable development, bridging the gap between science and the public.
Participating in this multidisciplinary project are members of the George S. Wise Faculty of Life Science (Departments of Zoology and Plant Sciences) and the Sackler Faculty of Medicine (Department of Anatomy and Anthropology); some of the laboratories of the Lester and Sally Entin Faculty of Humanities (the Sonia and Marco Nadler Institute of Archeology) are scheduled to join us in the new building.

We also take pride also in our involvement in nature and environmental conservation. Many members are very active in conservation and monitoring projects and on boards of public and environmental organizations, promoting science-based decision making in societal issues. Our report lists some of these activities.

Here we share with you the progress made in the past academic year 2007/2008.
International Scientific Advisory Board

Vicki Buchsbaum, Pearse Institute of Marine Sciences, University of California, Santa Cruz, USA

Jared Diamond, Department of Physiology, University of California, Los Angeles Medical School, Los Angeles, CA, USA

Paul Ehrlich, Department of Biological Sciences, Stanford University, Stanford, CA, USA

Daphne G. Fautin, Ecology and Evolutionary Biology, Invertebrate Zoology, University of Kansas, USA

Harold A. Mooney, Department of Biological Sciences, Stanford University, Stanford, CA, USA

Lord May of Oxford OM AC Kt FRS, Department of Zoology, Oxford University, Oxford, UK

Peter Raven, Missouri Botanical Garden, St. Louis, MO, USA

Daniel Simberloff, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN, USA

Edward O. Wilson, Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA
Nature Campus Steering Committee

Yoel Kloog, Dean of Life Sciences, Chair

Lea Pais, Director of the Research Authority

Amit Streit, Deputy Director-General for Finance Department

Sigal Adar, Director of Friends of TAU

Micha Ilan, Head of the Department of Zoology

Daniel Chamovitz, Head of the Department of Plant Sciences

Yoel Rak, Head of the Department of Anatomy and Anthropology

Tamar Dayan, Director of the Natural History Collections

Arnon Lotem, Director of the I. Meier Segals Garden for Zoological Research

Jacob Garti, Director of the Botanic Gardens
Nature Campus Science Committee

Daniel Chamovitz, Head of the Department of Plant Sciences, Faculty of Life Sciences

Tamar Dayan, Department of Zoology, Faculty of Life Sciences

Israel Finkelstein, the Jacob M. Alkow Department of Archaeology and Ancient Near Eastern Cultures, Faculty of Humanities

Jonathan M. Gershoni, Head of the Department of Cell Research and Immunology, Faculty of Life Sciences

Yoav Gothilf, Department of Neurobiochemistry, Faculty of Life Sciences

Abraham Hefetz, Department of Zoology, Faculty of Life Sciences

Ayala Hochman, Department of Biochemistry, Faculty of Life Sciences

Arnon Lotem, Department of Zoology, Faculty of Life Sciences

Rafi Nachmias, Constantiner School of Education, Faculty of Humanities

Yoel Rak, Head of the Department of Anatomy and Anthropology, Faculty of Medicine

Eliora Ron, Molecular Microbiology and Biotechnology, Faculty of Life Sciences

Marcelo Sternberg, Department of Plant Sciences, Faculty of Life Sciences
Museum staff

Tamar Dayan Department of Zoology Director

Curators (TAU faculty members)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoram Yom-Tov (emeritus)</td>
<td>Department of Zoology</td>
<td>Higher Vertebrates</td>
</tr>
<tr>
<td>Yehuda Benayahu</td>
<td>Department of Zoology</td>
<td>Invertebrates</td>
</tr>
<tr>
<td>Amnon Freidberg</td>
<td>Department of Zoology</td>
<td>Entomology</td>
</tr>
<tr>
<td>Menachem Goren</td>
<td>Department of Zoology</td>
<td>Fishes</td>
</tr>
<tr>
<td>Lev Fishelson (emeritus)</td>
<td>Department of Zoology</td>
<td>Fishes</td>
</tr>
<tr>
<td>Dorothée Huchon</td>
<td>Department of Zoology</td>
<td>Molecular Systematics</td>
</tr>
<tr>
<td>Baruch Arensburg (emeritus)</td>
<td>Department of Anatomy &amp; Anthropology</td>
<td>Physical Anthropology</td>
</tr>
<tr>
<td>Yoel Rak</td>
<td>Department of Anatomy &amp; Anthropology</td>
<td>Physical Anthropology</td>
</tr>
<tr>
<td>Israel Hershkovitz</td>
<td>Department of Anatomy &amp; Anthropology</td>
<td>Physical Anthropology</td>
</tr>
<tr>
<td>Nissan Binyamini (emeritus)</td>
<td>Department of Plant Sciences</td>
<td>Fungi</td>
</tr>
<tr>
<td>Margalith Galun (emeritus)</td>
<td>Department of Plant Sciences</td>
<td>Lichens</td>
</tr>
<tr>
<td>Ya'akov Lipkin (emeritus)</td>
<td>Department of Plant Sciences</td>
<td>Algae</td>
</tr>
</tbody>
</table>
### Curators
(TAU faculty members; new immigrants in various absorption schemes)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department of Zoology</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silvia Blumenfeld</td>
<td></td>
<td>Fungi Scientific Sciences</td>
</tr>
<tr>
<td>Vladimir Chikatunov</td>
<td></td>
<td>Coleoptera</td>
</tr>
<tr>
<td>Vassily Kravchenko</td>
<td></td>
<td>Lepidoptera</td>
</tr>
<tr>
<td>Sergei Zonstein</td>
<td></td>
<td>Arachnidae</td>
</tr>
<tr>
<td>Andy Lehrer (retired)</td>
<td></td>
<td>Diptera</td>
</tr>
<tr>
<td>Yuri Katz (retired)</td>
<td></td>
<td>Paleontology</td>
</tr>
<tr>
<td>Olga Orlov-Labkovsky</td>
<td></td>
<td>Micropaleontology</td>
</tr>
</tbody>
</table>

### Associate curators
(faculty members)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department of Zoology</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yossi Loya</td>
<td></td>
<td>Stony Corals</td>
</tr>
<tr>
<td>Micha Ilan</td>
<td></td>
<td>Sponges</td>
</tr>
<tr>
<td>Dan Gerling (emeritus)</td>
<td></td>
<td>Hymenoptera</td>
</tr>
<tr>
<td>Abraham Hefetz</td>
<td></td>
<td>Entomology</td>
</tr>
<tr>
<td>Bella S. Galil</td>
<td>Israel Oceanographic &amp; Limnological Research - Haifa</td>
<td>Crustaceans</td>
</tr>
<tr>
<td>Danny Simon</td>
<td></td>
<td>Formicidae</td>
</tr>
<tr>
<td>Ilan Yarom</td>
<td>Hazeva Research &amp; Development</td>
<td>Diptera</td>
</tr>
<tr>
<td>Eli Geffen</td>
<td></td>
<td>Molecular Systematics</td>
</tr>
<tr>
<td>Ofer Mokady</td>
<td></td>
<td>Molecular Systematics</td>
</tr>
<tr>
<td>Elazar Kochva (emeritus)</td>
<td></td>
<td>Herpetology</td>
</tr>
</tbody>
</table>
**VATAT supported expert collections managers**

Armin Ionescu-Hirsch, PhD  
Department of Zoology  
Hymenoptera

Daniella E. Bar-Yosef Mayer, Department of Zoology  
PhD  
Institute of Archaeology  
Paleontology

Moshe Guershon, PhD  
Department of Zoology  
Apoidea

Wolf Kuslitzky, PhD  
Department of Zoology  
Hymenoptera

**VATAT supported Post-docs**

Noa Shenkar

Efrat Gavish-Regev

**Technical assistants** (assistant curators, collection managers, technicians, taxidermist)

Revital Ben-David-Zaslow, PhD  
Department of Zoology

Avigail Ben-Dov  
Department of Zoology

Tova Feller  
Department of Zoology

Leonid Friedman  
Department of Zoology

Igor Gavrilov  
Department of Zoology

Ermin Ionescu, PhD  
Department of Zoology

Henk Mienis  
Department of Zoology

Reuven Landsman  
Department of Zoology

Tzilla Shariv  
Department of Zoology

Alex Shlagman  
Department of Zoology

Tirza Stern  
Department of Zoology

Erez Maza  
Department of Zoology

**‘Nature Campus’**

Yael Gavrieli, PhD  
Director

Anat Feldman  
Content Development

Erez Maza  
Public Programs Coordinator
Public programs - Nature Campus

Nature Campus continued in its activities to advance communication of science about the natural history and living environment of Israel to children, teachers, nature guides, and the general public. In some programs, natural history collections play a key role, while in other programs artifacts such as skulls, bones, nests, eggs, live insects and stuffed animals are integrated into the learning experience.

Programs based on the natural history collections:

Public programs:

- Guided Tours. The program offers a two hour activity at the I. Meier Segals Garden for Zoological Research or the Botanic Gardens. During 2007/2008, the Gardens played host to 4,100 visitors comprised of groups of schoolchildren ages 6-18, teachers, nature guides, students from other institutions of higher education, and other organized groups.

- Science Days. The program offers a three to four-hour activity for classes at the Natural History Collections (the "Museum Class") as well as at the Gardens. Most of the activity at the collections is based on the collection's artifacts. The themes that are covered are diverse and include, among others, Marine Biology, Nature Conservation, Biodiversity, Reproduction in Nature, Plants and Their Environment, Predators and Prey, Evolution of Man, Adaptation, and Ecology of Temporary Winter Pools. The number of participants in these programs was 1,800 children.

- Science Camps. Science camps were being held during the Hannukah, Passover and summer school vacations. The camp, a 5 days program, offers a scientific exploration of the biosphere for primary school children. Each day is focused on a major phenomenon or process in the living world, for example the food web, behavior and communication, and adaptation. This year we were not allowed to market the program to TAU staff by TAU e-
mail network, our main audience and avenue of marketing. Therefore, only 126 children participated

- Professional Development and Training Days. Diverse training programs offer conservation biology enrichment for teachers and environmental organizations staff. The professional training program is tailored according to the participants' requirements. This year 35 professionals, including teachers, participated in our in-service training programs.

Overall, participation in Nature Campus programs declined compared to 2006/2007 due to two events: 1) A long teachers strike. 2) The end of a four year project – Urban Nature, which operated in Yaffo elementary schools.

**On-Line resources**

- Since the Collections capacity for public visitation is much limited, we put special effort in developing Nature Campus website – www.campusteva.tau.ac.il – which outreaches to the public, and offers, in a language understandable to all, the wealth of scientific research based on the Natural History Collections (Learning resources section).

- Zoo On-Line is a joint project with TAU I. Meier Segals Garden for Zoological Research. 6-8 cameras are continuously broadcasting from the Zoo. The pictures are accompanied with information, updated by Nature Campus webmaster, on the Zoo inhabitants. The project is supported by Israel Electric Company and Moked Amon Security Company.

Earthweb: our changing world. An online primer. During 2007 we have launched a new website – [www.earthweb.tau.ac.il](http://www.earthweb.tau.ac.il) . The website – an online primer, offers information in Hebrew about the Earth systems, ecosystem services and highlight from status reports worldwide. The website was developed with the kind support of the Ministry of Environmental Protection and the Charles and Lynn Schusterman Family Foundation.
Progress at the natural history collections

Natural history collections are dynamic archives that record biodiversity. As such, they grow annually by new collecting activities and by incorporating smaller private or institutional collections. The collecting activities comprise focused collecting expeditions as well as by the products of numerous field studies carried out by scientists and their graduate students. Moreover, the Israel Nature and Parks Authority rangers collect vertebrate carcasses for the collections. Collecting, incorporating the collections, preserving and digitizing them, as well as managing the collections, the data, and the network of collectors and colleagues, is a formidable job that falls upon the shoulders of the curators, and, even more so, on those of the collections managers, technical assistants, and taxidermist. We are fortunate to have a group of active, knowledgeable, and dedicated technical staff members, who do their best, in the nearly impossible physical conditions and under-staffing, to preserve and expand this priceless record of biodiversity, and to help promote scientific biodiversity research. Their work is highly specialized, their knowledge priceless; almost all have academic degrees, most have either a PhD or an MSc, and all are the crucial backbone of the national collections of natural history at Tel Aviv University.

Our overworked collections managers have also produced this report, and we are particularly grateful to the work of Dr. Revital Ben-David-Zaslow in compiling it. Here they also report a little about the behind-the-scenes of managing the collections: collections news, collecting trips and expeditions, and new collections are reported here in a nutshell.
Collections News – A word from our collection managers

During the academic year 2007/2008 we continued our day-to-day activities at the Natural History Collections. As in previous years, we have invested much effort in advancing our goals. We continue to collect and preserve new scientific materials, rescue and incorporate important private and historical collections, maintain the existing collections, ship scientific material and data to those requesting them, and assist graduate students, academic courses, and “Nature Campus” activities.

Throughout the past year we have received and incorporated about 15,000 specimens from various taxonomic groups, collected worldwide by the collection curators and staff, students, rangers from the Israel Nature and Parks Authority, and others. As previously reported, the reptile collection is now active and more than 300 new records have been added this past year. Most of these were collected by graduate students during their field work.

We have continued to transfer the dry vertebrate collection to new specimen cabinets, purchased with the support of VATAT funds. About 380 new specimens have been preserved and added to the mammal collection and about 50 to the bird collection. These include specimens collected by rangers from the Israel Nature and Parks Authority and transferred to Tel Aviv University, where they are labeled and preserved by a professional taxidermist. Our taxidermist, Igor Gavrilov, participated this year in "The World Taxidermy Championship" in Salzburg. His bird exhibit (starring Ceryle rudis and Halcyon smyrnensis) was entered into the competition and during his stay he attended many seminars and workshops, studying the latest taxidermy techniques.

The collections obtained from Prof. Bella Galil and Dr. Menachem Goren's research at various stations in the Mediterranean (see below: Collection trips) have been sorted, preserved, and digitized for future research and identification. The material includes fishes, crustaceans, mollusks, and other invertebrates.
Nearly all new data available on the macro-fauna of the Mediterranean can be attributed to these collection trips.

Almost 400 new specimens were added to the soft coral collection this year. Prof. Yehuda Benayahu began preparing a collection of slides from soft coral paratypes and types skeletons. To date, about 600 slides have been prepared. During October 2007 an international soft coral taxonomic workshop took place in Phuket Marine Biology Center (TPMBC, Thailand). Prof. Yehuda Benayahu was one of the resource persons of this activity in which 25 students from different countries participated. The students had the opportunity to get training in taxonomic practices of Octocorallia, their ecology and biology.

Routine work on the insect collection includes labeling and sorting of specimens from collecting trips and donated collections; identification of and research on select groups (including over 52 shipments of scientific specimens to specialists, mostly overseas, during 2007/2008). As in the past years, we have continued digitizing this collection. Newly-caught insects are immediately given a catalog number and digitized. During the current year approximately 1,000 new insects were added to the collection and more than 7,500 old specimens were digitized. Vladimir Chikatunov performed extensive identification work on a beetle collection caught in pitfall traps and malaise traps from various projects and areas (southern Arava and southern Jordan, Mt. Carmel, Nizzanim, Adullam, Avedat and Lehavim, the coastal plain, Nahal Shaharut, the Jordan Valley and others). There is a close working relationship between the "Plant Protection and Inspection Services" (PPIS, Ministry of Agriculture) and the insect and arthropod staff. As in previous years, the collection staff have provided identification services and guided the PPIS members.

After years of awaiting a "father", the Apoidea collection is now curated by Dr. Moshe Guershon. Following a preliminary inventory, we now know that this
important collection contains about 30,000 specimens. Although not all of them have yet been classified, most are distributed among eight families, approximately 90 genera, and with more than 1,300 determined species. The majority of the species are exemplars from the Israeli fauna, but also feature a respectable number of representative specimens from all over the world. All of this information has been uploaded to a digitalized data base, which will allow easy access for scientific and technical investigations. Dr. Moshe Guershon is also working on determination of the unclassified material and preparing an interactive practical identification key for Israeli bees, based also on the collection and the data base.

As reported previously (see the 2006/2007 Annual Report), we began working on the isopod and other terrestrial invertebrate collection donated by Prof. Michael R. Warburg. To date, more than 650 isopod specimens have been incorporated into the collection, which gives us an opportunity to study the unique fauna of the Isopods of Israel.

We continue our fruitful cooperation with students collecting samples in the field. These collections are immediately digitized in order to facilitate the easy transfer of specimens to the museum in the near future. Cooperation between students and the collections staff is excellent. We give the students support in all areas including preservation, identification, labeling and cataloguing. Tirza Stern has developed a unique data base for this purpose and continues to work with the students, adjusting it to their specific needs. Prof. Avital Gasith's students have already transferred to the National Collections more than 4,500 items (800 from this year alone), consisting of freshwater invertebrates caught in various rivers in Israel. Prof. Tamar Dayan's students have transferred to the museum a very large collection of mammals, amphibians, reptiles and arthropods caught in pitfall traps. The vertebrates among them have been preserved, identified, digitized and labeled and the invertebrates have been preserved and sorted for future identification. An additional collaboration is
being conducted with the laboratory of Dr. Yael Mandelik from the Faculty of Agricultural, Food and Environmental Quality Sciences, a collaborative project with Prof. Tamar Dayan and Prof. Abraham Hefetz. The research engages with biodiversity and ecosystem services in the arid agro-natural landscape of the Arava Rift Valley, across the Jordanian-Israeli border. It focuses on the pollinator guilds, specifically bees, and the pollination services they provide to crops and wild plants. Wild and managed bees (*Bombus* and honey bees) are collected, using netting and pan traps (plates filled with soapy water). The museum staff is directing this research, instructing on how to identify the insects and how to conduct a collection. All the Hymenoptera specimens in this research are properly labeled and have a museum catalog number. At the end of this study the items will be incorporated into our collections.

**Progress Report for the Mollusc Collection 2007-2008**

**Henk K. Mienis and Revital Ben-David-Zaslow**

The research project carried out by Dr. M. Goren in cooperation with Dr. B.S. Galil on "The impact of biological invasions and climatic change on the biodiversity of the Mediterranean Sea" has also influenced the mollusc collection. Especially noteworthy are the numerous cephalopod samples, preserved in ethanol, which were received for study and permanent housing in the collection. This year we again identified a large number of littoral molluscs, which had been collected by Dr. E. Shefer (Israel Oceanographic & Limnological Research Institute, Haifa) at certain pre-determined stations along the Mediterranean coast for her research on the presence of heavy metals. Likewise, Dr. S. Moran sent us for identification some 20 samples of land snails intercepted by inspectors from the Plant Protection & Inspection Services of the Ministry of Agriculture & Rural Development and found on imported and exported agricultural and horticultural merchandise. In addition, much new
material was received from colleagues and friends in Israel and abroad (see new acquisitions). Between all these various activities we have continued the revision and incorporation of the collections of Derk A. Visker (received in the early 1970's) and Haim (Vittal) Treves (received in 1999) into the general Mollusc Collection. The identifications were carried out by Henk Mienis, while Revital Ben-David Zaslow and Oz Ritner dealt with computerization of the material. At the moment 41,170 samples representing 5,485 taxa in the mollusc collection have been digitized.

New acquisitions

New material has continued to arrive at the collection. All the samples are immediately identified and prepared for permanent storage.

Just before finishing this report we received the private shell collection of Mr Zvi Orlin (Qiryat Motzkin), consisting of over 8,000 samples, for permanent conservation in the National Mollusc Collection. A full report on this collection will be given in the Annual Report for the academic year 2008/2009.

During the academic year 2007/2008 new material was received from the following persons:

<table>
<thead>
<tr>
<th>Name</th>
<th>Brief description of the material</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. Agren</td>
<td>Terrestrial snails Western-Sahara</td>
</tr>
<tr>
<td>Y. Bar</td>
<td>Terrestrial snails from Israel</td>
</tr>
<tr>
<td>Z. Bar</td>
<td>Terrestrial snails from Israel and Cyprus</td>
</tr>
<tr>
<td>G. Bartman</td>
<td>Terrestrial snails from California, U.S.A.</td>
</tr>
<tr>
<td>K.H. Beckmann</td>
<td>Terrestrial and freshwater molluscs from Malta</td>
</tr>
<tr>
<td>R. Ben-David-Zaslow</td>
<td>Freshwater molluscs from Israel</td>
</tr>
<tr>
<td>B. Dharma</td>
<td>Neritidae from Indonesia</td>
</tr>
<tr>
<td>D. Fehse</td>
<td>Triviidae from the Indo-Pacific</td>
</tr>
<tr>
<td>B.S. Galil</td>
<td>Marine molluscs from the Mediterranean off Ashdod and Turkey.</td>
</tr>
<tr>
<td>M. Goren</td>
<td>Marine molluscs from the Mediterranean off Ashdod and Turkey.</td>
</tr>
<tr>
<td>J. Grego</td>
<td>Terrestrial snails from Slovakia</td>
</tr>
<tr>
<td>E.L. Heiman</td>
<td>Marine molluscs from Philippines</td>
</tr>
<tr>
<td>A. Israeli</td>
<td>Freshwater molluscs from Israel</td>
</tr>
<tr>
<td>M. Keppens</td>
<td>Molluscs from Belgium, Italy, New Guinea and New Zealand</td>
</tr>
</tbody>
</table>
Y. Krotman  Terrestrial and freshwater snails from Israel  
K. Lamprell  Marine bivalves from Australia  
Z. Lewy  Freshwater molluscs from Israel  
O. Ma’or  Freshwater molluscs from Israel  
D. Mienis  Terrestrial and freshwater molluscs from Israel  
H.K. Mienis  Molluscs from the Netherlands, Israel, Turkey and worldwide  
C. Mifsud  Paratypes of a new marine mollusc from Malta  
O. Mor  Freshwater molluscs from Israel  
Z. Orlin  Marine, terrestrial and freshwater, worldwide molluscs (+ 8000 samples).  
O. Orlov  Terrestrial snails from Czechia  
R. Ortol  Freshwater molluscs from Israel and terrestrial snails from Italy  
J. Reichhoff  Freshwater snails from Costa Rica  
O. Ritner  Terrestrial snails from Brazil and Israel  
P.M. Sammut  Terrestrial snails from Malta  
O. Santos  Terrestrial and marine snails from South America  
G. Scheller  Marine molluscs from the Indo-Pacific  
H. Schütt  Terrestrial and freshwater molluscs from Syria  
E. Schwabe  Neritidae from Western Samoa  
E. Shefer  Marine molluscs from the Mediterranean coast of Israel  
A. Shmida  Terrestrial and freshwater snails from Morocco, Jordan and Israel  
B.S. Singer  Marine molluscs from the Gulf of Aqaba  
Y. Taslitsky  Marine molluscs from the Mediterranean coast of Israel  
J.S. Torres Alba  Terrestrial snails from Spain and Morocco  
B. Verdcourt  Land- and freshwater molluscs from Israel  
U. Werner-Reiss  Freshwater molluscs from the Sea of Galilee  

Type Material

Shortly before his death, Karl-Heinz Beckmann (1948-2008) donated two paratypes of *Trochoidea (Xeroclausa) gharlapsi* Beckmann, 1987, an endemic Maltese land snail, to the mollusc collection (TAU MO 59289). From our colleague Bella Galil we received a paratype of a new Rissoïd species: *Setia levantina* Bogi & Galil, 2007 (TAU MO 52282), which had been discovered along the Tel Aviv shore of the Mediterranean Sea at a depth of 20-25m. Charles Mifsud sent us three paratypes of a new Turrid species from the Mediterranean waters near Malta: *Mangelia melitensis* Cachia & Mifsud, 2008 (TAU MO 57001).
Mollusc conservation

A tropical freshwater snail *Thiara scabra* (Müller, 1774) was recently found for the first time in two areas in Israel: Nahal Qibbuzim in Emek Bet She'an and the Sea of Galilee (Yam Kinneret) (Mienis, 2008; Mienis, H.K. & Mienis, D., 2008a-b). Its presence in the Sea of Galilee, the major source of drinking water in Israel, is especially alarming. Near Kibbutz Ma'agan over 6000 specimens per square meter were counted in April 2008! In that corner of the lake it is already by far the most numerous gastropod species and in a relatively short time it seems to have replaced its local relative *Melanoides tuberculata* (Müller, 1774). Even more alarming is the fact that it may also endanger the endemic *Falsipyrgula barroisi* (Dautzenberg, 1894).

This Thiariad species most probably arrived in Israel as a hitchhiker on aquarium plants and, after becoming too prolific in local aquaria, excess snails were then released into natural aquatic habitats, as has been done with other aquarium plants and animals in the past. It is now already too late to remedy the current situation. However, more stringent laws should be introduced to regulate the aquarium trade.

References
Progress Report for the Paleontological Collection 2007-2008
Yuri Katz, Olga Orlov-Labkovsky and Henk K. Mienis

During the past academic year Yuri Katz has studied the microfossils (Foraminifera, Porifera, Bryozoa, Brachiopoda and several representatives of other phyla) present in Quaternary bottom samples from the Gulf of Aqaba. In addition, he is working on the general taxonomy of the Protozoa.

Olga Orlov-Labkovski is working on foraminiferal assemblages of the Visean and Serpukhovian deposits representing the Carboniferous period (Upper Paleozoic) in the Middle Tien-Shan (Central Asia, Uzbekistan and Kazakhstan).

Thin-sections with foraminiferal assemblages were cut from samples collected from the continuous marine Carboniferous sequences of two sections of the Visean-Serpukhovian transition: Mashat section (river Mashat, Tallas Alatau Range, Kazakhstan), which was deposited on the inner platform of a shallow sea and is rich in fossils; and Paltau section (river Paltau, on the right-bank, Chatkal Range, Uzbekistan), which was deposited in a basinal setting.

The thin-sections represented assemblages of the following foraminiferal zones, which are arranged stratigraphically bottom-up:

- the Visean Stage – the Nodosarchaediscus saleei – Archaediscus gigas and the Endothyranopsis crassa zones;
- the Serpukhovian Stage – the Neoarchaediscus regularis – Biseriella parva zone, the Eosigmoilina explicata – Loeblichia minima – Plectostaffella primitiva zone and the Plectostaffella miri obtusa zone.

This material has been revised and photographed (about 500 pictures), and will be transferred to the Palaeontological Collection when it will be digitized.

The material is of fundamental importance for understanding the biostratigraphical position of the Visean-Serpukhovian boundary, which is at the moment a topic of discussion by the Sub-committee on Carboniferous
Stratigraphy of the International Commission on Stratigraphy of the Union of Geological Sciences (IUGS).

Samples of fossil representatives of certain families among the Gastropoda-Mollusca have been revised. Henk Mienis carried out a revision of the Neritidae and Viviparidae, André Burger (the Netherlands) dealt with the Strombidae and the Rostellariidae, and Dirk Fehse (Germany) studied the Cypraeidae, Triviidae, Ovulidae and Eratoidae.

The mollusc collection of Derk A. Visker (received in the early 1970's) contains numerous fossil molluscs from the Eocene of France, Pliocene of Belgium and Pleistocene of the Netherlands. The collection of A. Hadar contains some fossil material from the Pliocene and Pleistocene of North America. Henk Mienis is currently updating the identifications of these samples, and after computerization they will be transferred permanently to the general Paleontology Collection.

**New acquisitions**

Some new material has been received for the collection. Most of the material consists of molluscs and ranges from a few items (O. Kerman and D. Mienis) to several large soil samples of quaternary age taken from the Hula Valley near Gesher HaPekak (N. Bergman). This material, over 100 kg in weight, is extremely rich in freshwater molluscs.

<table>
<thead>
<tr>
<th>Name</th>
<th>Brief description of the material</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Bergman</td>
<td>Quaternary material (mainly molluscs) from two trenches in the former Hula swamps in the vicinity of Gesher HaPekak</td>
</tr>
<tr>
<td>O. Kerman</td>
<td>Fossil molluscs Campanian, Israel</td>
</tr>
<tr>
<td>D. Mienis</td>
<td>Various fossil molluscs from Israel</td>
</tr>
<tr>
<td>R. Ortal</td>
<td>Two fossil fishes from the Upper Jurassic, Lower Tithonian, from Eichstätt, Germany</td>
</tr>
</tbody>
</table>
Over the past year most of the research has been devoted to two main fields: study of mollusc shell assemblages and the study of the earliest stone bead assemblages discovered in archaeological sites in Israel. The research of both topics is based on comparison of the archaeological finds to comparative collections of shells and minerals.

One of the shell assemblages studied is that of the Qafzeh Cave in the Lower Galilee. This assemblage comprises only 10 shells; however, being one of the earliest such assemblages in the world, it represents the activities of archaic *Homo sapiens* from about 92,000 years ago. Because of its significance to going on debate in the archaeological literature concerning evidence for the behavior of modern humans, each of these shells has been described in detail. Furthermore, the species represented, *Glycymeris insubrica*, is a bivalve species on the verge of extinction in the eastern Mediterranean; hence, gathering information on its history is also of interest. A paper on this topic has been submitted to the Journal of Human Evolution and is currently under review.

This past year was also dedicated to the final analysis and publication of shell middens the Late Stone Age (eighth millennium BP) from the Red Sea coast of Eritrea. The research revealed that following climate changes around 7,300 years ago, and in particular a change in the regime of monsoon rains in north east Africa, as human populations settled along the coast. They profited from the proximity to fresh water, as well as food from the particular shells that were available in that area despite the harsh climate conditions. A paper on this study is in now press in the Journal of Island and Coastal Archaeology.

Scaphopods are molluscs known by their popular name, tusk shells, or by the common genus, *Dentalium*, and were used by prehistoric humans of the Natufian culture (ca. 14,500-11,500 years ago) as personal ornaments. Such
shells are common in graves and domestic areas, and decorated the skulls and skeletons of these people. The origin of these shells is now known to be in the Mediterranean, the Red Sea and also from fossil exposures. To ascertain the origins we engaged in a detailed taxonomic study with a graduate student from the Polish Academy of Science, Ms. Aldona Kurzawska, and with the collections manager of Israel’s mollusc collections, Mr. Henk K. Mienis. Initial results are being prepared for publication.

In July 2008 I joined an international excavations expedition at the Neolithic site of Çatalhöyük, Turkey. The study of mollusc shells from this site will benefit both cultural and environmental aspects of the research. The identification of the shell species, and especially their origins, will disclose the areas of south-west Asia with which the human population exchanged trade and relations. Dozens of shells were brought to the site from the Mediterranean, Red Sea and other locales. Thousands of shells from nearby freshwater sources produced food, served as raw material for decorations, and as raw material for the construction of mud bricks, from which most houses at the site were built. Researchers at the site disagree on the environmental reconstruction of the site at 7400–6000 cal bc, based on geological and botanical reconstructions. Along with a Turkish malacologist, Dr. Burçin Gümüs, and in consultation with Mr. Henk K. Mienis, we will attempt to add our own insight to the environmental reconstruction of the site, based on the molluscan fauna.

Research of the earliest stone beads produced by humans in the Levant was carried out in collaboration with Dr. Naomi Porat of the Geological Survey of Israel. In a recently published paper we demonstrated that there is a connection between the appearance of green stone beads and the onset of agriculture about 11,000 years ago. Our suggestion that green stone beads had a symbolic value connected to fertility was published in the Proceedings of the National Academy of Sciences.
Some of the projects mentioned above have been completed (Qafzeh, Erithrea), while others are still ongoing (Natufian Dentalium, stone beads, Çatalhöyük shells). Additional studies are planned, including a study of the aquatic resources of the Natufian culture.

**Progress Report for the Fungi Collection 2007/2008**

**Project: Biodiversity and conservation of higher Basidiomycetes in Israel**

Silvia Blumenfeld

During this year we have worked on the following items:

**Taxonomy and ecological diversity of fungi in Israel**

**Order Agaricales.** Following the revision of the two main Orders of higher fungi, Agaricales and Aphyllophorales, we continued working on the data base of toxic Agaricales, classifying them into groups according to the mycotoxin content and certain ecological features. During this time we have established five species that had not been previously recorded from Israel.

**Order Aphyllophorales.** We have found 18 new records for Israel of wood-rotting fungi (Aphyllophorales). All the species were located in Tel Aviv, in the Botanical Gardens of Tel Aviv University and in northern area, in the Beit Oren forest.

**Fungal culture collection**

We have continued to add new strains to the filamentous fungi collection from Israel and other countries. We started working on this collection in Israel in 2003, continuing the LIHLCOM collection that I began to curate in 1992 in Argentina. Two years ago we affiliated the collection with the World Federation of Culture Collections (WFCC), and to the World Directory of Collections of Culture of Microorganisms (WDCM), which holds the world data base of microorganisms. At present we have records of 225 species and 52 genera.
New biotechnologies applied to wood-rotting fungi

As we reported last year, our work with wood-rotting fungi led us to the possibility of presenting a patent on medicinal mushrooms. During this period we have worked on new extraction methods (with better yields) of betaglucans and antiviral fractions of two strains of the TAUFCC fungal culture collection. We are now seeking financial support for such a patent.

Interim report on the partial revision of the genus Camponotus and the associated curating activity

Armin Ionescu

During the past year we have prepared a provisional annotated list of the Camponotus species from Israel (with synonyms, previous records, notes and material examined) and the associated identification key. The annotated list was compiled following examination of all specimens from the TAUI and PPIS collections, plus type material received on loan. It contains 18 Israeli species and eight imported species. Prior to examination of the original material deposited at MCZ Harvard, three species previously reported in the literature were considered of uncertain taxonomic status. Following the revision of previous work and examination of available material, the number of Camponotus species reported to belong to the Israeli fauna has now increased from the 11 published to 18.

Over the years, the TAUI collection has incorporated identified and unidentified material from several private collections, e.g. the E. Schmitz, J. Palmoni and H. Bytinski-Salz collections. In these collections especially, the identification of many specimens has changed as a result of the current revision. Consequently, as part of the curating activity of the ant collection, the placement of many specimens has also changed.
The revision included a reexamination of the identification of each specimen in the collections. About 900 ant specimens that were previously considered representatives of intra-specific variability are now candidates for remeasurements and photography. These specimens will form the basis of the new arrangement of the *Camponotus* species in TAUI.

**Progress Report: Ascidian Collection 2008**

**Project: Taxonomic study of the ascidian fauna along the Israeli coasts**

Noa Shenkar

Ascidians (Phylum: *Chordata*, Class: *Asciidiacea*), or sea squirts, are the largest and most diverse class of the sub-phylum *Tunicata* (also known as *Urochordata*). They comprise approximately 3,000 species found in all marine habitats from shallow water to the deep sea. Despite the enormous progress that has been achieved in the field of ascidian research worldwide, only a few studies have focused on the ascidians of the Red Sea and the Eastern Mediterranean. The current study's main goal is to establish an up-to-date museum collection of ascidians of these regions, with a focus on documenting the arrival and spread of non-indigenous species along the Mediterranean coast. In order to allow identification of ascidians to species level, the live material must be fixed in formaldehyde, preventing in many cases DNA-based research for most of the ascidian collections worldwide. The uniqueness of the current collection is that it will enable future molecular based studies on material preserved in ethanol together with classic taxonomic studies on the matching species. The collection currently includes more than 500 items and is expanding. To date, 60 specimens have been identified from the Mediterranean coast of Israel, including seven non-indigenous species. In addition, a new species to science belonging to the genus *Rhopalaea* is now being described. Several day-trips have been conducted to the Hadera Electric Company pier, the Dor-Habonim nature reserve, Atlit, Nahariya and Achziv, together with extensive sampling in Eilat, Gulf of Aqaba.
Efrat Gavish-Regev

Although at least 50 spider families are known from Israel and some of them have been extensively studied, there is still a scarcity of knowledge on the taxonomy, biology, and ecology of many of these spider families. Sheet-web spiders (Linyphiidae) are the second largest family of spiders, with approximately 4,345 species (>10% of all known spider species) in 576 genera. Linyphiids have a worldwide distribution, and are most diverse in the northern temperate regions where they account for a large fraction of spider species richness. Despite their prominence in most terrestrial ecosystems, much of spider diversity, and particularly of linyphiids, remains poorly documented. Currently only six linyphiid species are reported from Israel. The knowledge on linyphiids in semi-arid and arid habitats is limited, making linyphiid species richness in these areas is largely unknown. In our research, we describe and document the linyphiid fauna of Israel, and the geographic distribution ranges and habitat preferences of the linyphiid species. In order to do so, we are currently sorting material from the Arachnid Collection of the Zoology Department, Tel-Aviv University, the Arachnid Collection of The Hebrew University of Jerusalem, and the research collections of the Ecology Department at Ben-Gurion University of the Negev. The specimens have been identified to species level, and new species have been described/re-described. To date we have found 24 linyphiid species, only one was previously reported from Israel. Out of the 24 species, seven are presumably new to science and are now being described. The spider collection at Tel-Aviv University contains material collected during ecological studies from various regions of Israel by Dr. Yael Mandelik and Arie Landsman, Udi Columbus and Tal Levanony, Ina Steinberg, Merav Vonshak, and Orit Skutelsky.
Ant surveys: The little fire ant (*Wasmannia auropunctata*)

Merav Vonshak

Following the discovery of the little fire ant (*Wasmannia auropunctata*) in Israel at the end of 2005, we conducted a survey, from January 22nd to March 7th 2006, in order to evaluate the extent of the infestation. The ants were found in four out of five of the villages that were examined, in agricultural fields and a nature reserve, implying a much larger infestation. The results were set on GIS maps and transferred to the Ministry of Environmental Protection to aid eradication. We later conducted one-day surveys of newly-discovered infestations in Dafna, Ma'abarot, Tel Aviv, Newe Yaraq, Hod Hasharon, Ramot Hashavim and Savion, between October 2006 and September 2008, in some of which individuals from the Ministry of Environmental Protection or the Israel Nature and National Parks Protection Authority participated. All data regarding the ants' distribution was shared with the Ministry of Environmental Protection. Additionally, for the past 18 months we received 180 ant's samples for identification from The Israel Nature and National Parks, The Ministry of Environmental Protection and from different exterminators.
Collecting trips and expeditions

Constituting a dynamic archive, our Natural History Collections grow annually through donations, research projects, and collecting trips and expeditions. Many research projects have added numerous specimens to our collections, while other collections have benefited from focused collecting trips. Here we report on some of the new collecting activities of our scientists.

Ichthyological Laboratory

Menachem Goren

In January 2008 we began a research on “The impacts of biological invasions and climate change on the biodiversity of the Mediterranean Sea”. The project is being carried out within a cooperative framework between the Porter School of Environmental Studies and the Italian Ministry of the Environment, Land and Sea. The project is coordinated by M. Goren (TAU) in cooperation with B. Galil and A. Diament (ILOR). As part of the research we have carried out to date seven collection cruises along the Israeli coast of the Mediterranean and in Antalya and Iskenderun Bay (Turkey,) where we enjoyed the collaboration of Dr. Baki Yokes and his students and the invaluable help of local fishermen. Hundreds of thousands of specimens were sorted and examined and many have been preserved and deposited in the collections of fishes and invertebrates. Unfortunately, the extreme shortage of space in the collection halls has severely limited our ability to retain a sufficient number of samples.
Benthic biodiversity surveys off the Mediterranean coast of Israel

Bella S. Galil

In 2008 eight campaigns were conducted off the Mediterranean coast of Israel in order to sample the benthic biota. Bella Galil, Mel Cooper, Limor Shoval, Eva Mizrahi, and Guy Paz participated in the cruises that took place aboard the R/V Shikmona and Etzion of the National Oceanographic Institute, IOLR. The surveys were conducted as part of baseline studies or monitoring surveys (off Palmahim, 05.2008, 09.2008, 37m depth, box core and trawl samples; off Ashdod, 05.2008, 12m depth, box core samples; 05.2008, 12 m depth, box core samples; off the coastal streams, 08.2008, 7-15 m depth, grab samples). The macrofaunal samples – several hundred specimens – include rare records for the Israeli coast and new records of alien species (in press).

The material is housed in the Natural History Collections, Department of Zoology, Tel Aviv University, Israel

Collecting trips by the Entomologists

Amnon Freidberg and Ariel-Leib-Leonid Friedman

Cyprus. In early April, 2008, Leonid Friedman and I traveled to Cyprus for a few days. The main aim of this trip was to study a new species of a pictured-wing fly of the genus Dorycera (Ulidiidae) that had been discovered as an endemic of Cyprus several decades ago, and of which I'd managed to collect only a single female during my first visit to the island, two years earlier. Dorycera is a primarily Mediterranean genus, which was revised several years ago by my M.Sc. student, Hanan Ackerman. This revision has not yet been published, partly because I wanted this new endemic species also to be represented by TAU specimens. The species was represented (in other collections) from various localities throughout the island, and it was collected in late March and April.
We landed in Larnaka in the evening. The next morning, having rented a car, we drove toward the mountains not far from Larnaka (to an area in the eastern part of the Greek territory from which specimens had been collected before) and were immediately struck by the extreme dryness caused by several successive periods of draught. Needless to say, we found no *Dorycera* and indeed very few insects. I was ready to go back home, but we decided to give ourselves another chance. The next day we met a colleague, Mr. Chrystodoulus Makris, whose home was a village located at a relatively high elevation of the central mountains. We drove from Limassol up the mountains, stopping at about 300m altitude at a place suggested by Christodoulus. This location had a much greener and lusher vegetation than the location at the same altitude that we had visited the previous day. After about an hour of collecting, and despite the good diversity of various insect groups, I still considered that we should return home. It was exactly then that I saw Leonid from some distance dancing on the slope. As we approached he yelled out that he has found the species we were looking for, and he was right! He did have two specimens of this handsome species (see illustration).

With renewed energy the three of us resumed our search, and indeed we ended up with about 20-30 specimens. To celebrate this success we drove to Christodoulus home village, where we visited his elderly parents, were invited for a tasty lunch prepared by his mother, and ended up at a winery that he had designed (he is a professional architect and an amateur entomologist). During the remaining two days we returned twice to the same site (near the village of Nata) and collected additional specimens, altogether over 100. It is interesting to note that most of the specimens were found on a relatively arid slope of that hill and not in the anticipated area of the most lush vegetation. I am grateful to both my colleagues for their help, without which I would not have been able to obtain this nice series of *Dorycera* species.
**Israel.** A sampling of the insect fauna was performed on 18 March.2008 in the Umm-Zuqa Reserve, situated partly in the Jordan Valley and partly on the slopes of East Samaria. This was carried out upon the request of the Israel Nature and Parks Authority. Several rare species of Diptera, Coleoptera and Formicidae were collected and recorded, including three species of beetles new to the Jordan Valley.

**Africa.** A trip to East Africa (Ethiopia and Kenya) and Madagascar was carried out in October-November 2008, in order to study and collect material for the National Collection of Insects. The participants were: Dr. Amnon Freidberg, Mrs. Liat Gahanama (both working on Diptera) and Mr. A.-L.-Leonid Friedman (working on Curculionoidea). The main goal of the trip was Liat's PhD, working on the taxonomy, systematics and biology of schistopterine fruit flies. It was the second trip dedicated to this study, and it focused on the Schistopterini fauna of Madagascar.

There is no direct flight connection between Israel and Madagascar, so we (Amnon and Leonid) flew to Nairobi via Addis Ababa, and stayed in Nairobi while waiting for the flight to Antananarivo (Tana). In Kenya we spent a full day in the Karura Forest, Nairobi, collecting much good material, including many rare species of fruit flies and weevils, not represented previously in the Israel National Collection. The next day we flew to Madagascar and started a series of meetings with organization mediating between the local nature preservation organizations and foreign researchers. Natural habitats in Madagascar are in a very bad state: almost entirely destroyed in the central part of the island, and damaged severely in other parts. The last existing patches of natural landscapes have been declared as reserves in the last 10-15 years, and any research activity, including collecting, in those areas requires special permits from the authorities. It takes at least half a year to obtain a permit, which is specific to a particular reserve and sets out many conditions. In Tana we met Liat, who had come via Paris, and a local student, Mr. Tefiarisoa Zelin Ratovonomenjanahary (nicknamed "Tefy"), who participated in all our
excursions based on the conditions set by MICET and other authorities. We soon discovered him to be a very pleasant fellow and also very useful for us, as he spoke English, French and Malagasy. He greatly helped us in finding our way, shopping and talking with the locals.

During our 3-week stay in Madagascar collecting trips were made to the following regions:

1. The dry semi-desert area in the south-east of the island (Fort-Dauphin, Berenty); the collecting took place mostly in the dry savanna-like landscape, but also in the mountain rainforest of Isaka. Most of Liat's research was carried out in this area: two new species of Schistopterum were found and collected, and some behavioral observations were made on them and on Bactropota sp.

2. The rainforest of Ranomafana (the collecting was unpleasant and not productive here, due to the frequent rain).

3. The rainforest of Andasibe (Perinet). The collecting was very productive, although we were deceived by the authorities: Despite having paid for a permit for collecting INSIDE the reserve, we were given a permit to collect only OUTSIDE of the reserve. However, we found a forest research station, managed by a German ecologist, Dr. Reiner, who allowed us to collect in the Analamazaotra Forest, adjacent to the reserve.

4. We performed a very fruitful collecting in the Tsimbazaza Botanical and Zoological Garden, inside Tana, which is actually the last area of more or less un-destroyed nature in the central part of Madagascar. We made a short visit to the National Entomological Collection of Madagascar, and briefly studied part of the collection of weevils.

**Results of the collecting on Madagascar:**

Beetles (Coleoptera): 3,101 specimens belonging to at least 800 species were collected, 585 determined at least to the rank of family, including 196 species
of weevils (Curculionoidea) (1701 specimens) and 226 species of leaf-beetles (Chrysomelidae) (712 specimens).

Diptera: A similar number of specimens, including about 50 species of fruit flies (Tephritidae), many of which are undescribed, and several had not been represented in our collection before (AF had previously collected on Madagascar in 1991). Several species were reared from host plants. Many specimens of other Diptera families were collected, including Margo sp. (Marginidae) and *Nemula longarista* (a genus and species described by Amnon), taxa restricted to the Island and whose genes are now being sequenced.

Around 2,000 specimens of insects from other orders were collected, particularly Hemiptera (bugs and cicadas) and Hymenoptera (bees, wasps and ants).

While Liat returned to Israel, we continued on to Ethiopia. We had a half day connection in Nairobi during which we had four hours of good collecting in the nearby Ngong Hills, resulting in around 20 species of fruit flies and around 20 species of beetles. We landed in Addis Ababa at night, spent the entire next day looking for a vehicle, and left the city in the evening. One of our main destinations in Ethiopia was the ancient city of Harar in the eastern part of the country. During that week we collected in the Rift Valley, including the Awash area and the Awash National Park; in the Ahmar Mountains; in and around Harar; and east of Harar. In addition to insect collecting we observed the unique custom of the feeding of wild spotted hyenas in Harar, and several species of wild ungulates (oryx, Soemmerring's gazelle and kudu) in the Awash National Park. We also visited a small but interesting museum of the wildlife of Awash in the Awash NP, which exhibited stuffed mammals and birds, skins, heads and parts of skeletons.
The collecting in Ethiopia resulted in around 100 species of flies, including about 50 species of fruit flies (Tephritidae); around 150 species of beetles and about 100 species of other insects. Although this material is still not completely sorted, we can point out among the collected materials two undescribed species of *Bengalia* (Diptera; Bengaliidae) and a series a species belonging to the rarely collected primitive genus *Apiomorphus* (Coleoptera; Curculionoidea; Apionidae).

**Activity report: October 1, 2007-September 30, 2008**

Yehuda Benayahu

1. Comprehensive collections of soft corals were conducted La Reunion (Indian Ocean) during April 2008. Over 140 samples were collected in various reef sites and habitat there. This was the first ever conducted soft coral survey in this remote island. The collection comprised ca 25 species, including 4 new ones that wait for taxonomic description.

2. Bases on a collection conducted in Hong Kong in December 1999 which deposited at the Natural History Collections, Tel Aviv University, three new species of soft corals were described. The new species belong to the genera *Paraminabea*, *Sarcophyton* and *Lobophytum*. Two publications that summarized the finding of this survey were submitted for publication.

3. During a visit to Paris Museum of Natural History (December 2007) I examined all type material of the soft coral genus *Cladiella* which is deposited there. All types were photographed. Samples were removed from the type material and later used for preparation of permanent slide mounts to be used as reference while identifying material of that genus. All slides (>120) are deposited at the Natural History Collections, Tel Aviv University.
Collecting in the Netherlands and a visit to the Zoological Museum of Amsterdam

Henk K. Mienis

In September 2008 I again spent a month in my native Netherlands. Besides visiting my family, most of the time was used for fieldwork for the project "Mapping of the Molluscs in the Netherlands". This work was mainly accomplished in the province of North Holland and on one of the Wadden Sea islands, Terschelling, in the province of Friesland.

Although in general I collect land and freshwater molluscs, this time my main interest was focused on the presence and distribution of invasive molluscs. This has already led to the publication of about 15 installments in the series "Strangers among the land snails of Terschelling", as well as numerous additional faunistic notes on the distribution of other exotic molluscs in the Netherlands.

This autumn 50 localities were sampled on Terschelling and 44 localities elsewhere, mainly in North Holland. Part of the preserved material and empty shells are now housed in the National Mollusc Collection of Tel Aviv University. They are intended to serve as tools for the identification of snails intercepted by inspectors from the Plant Protection & Inspection Services of the Israeli Ministry of Agriculture and Rural Development, on agricultural and horticultural products arriving in Israel, mainly via the international flower market in Aalsmeer, Netherland. A small part of the collected material found its way to the Department of Malacology, at the Zoological Museum of Amsterdam, of which I am an Honorary Associate.

This year we were able to solve problems connected with the sudden appearance of two invasive freshwater gastropods on Terschelling. The presence of *Haitia acuta* (Draparnaud, 1805) was traced to a local garden center, where all the aquatic plants, "imported" from the mainland, turned out to be
heavily infested with this North American snail. The recent finds of *Ferrissia clessiniana* (Jickeli, 1882), a tiny limpet-like snail originally described from the Nile delta in Egypt, was traced to the recent planting of water lilies (*Nymphaea alba*), an exotic species for this island, in aquatic habitats which had been previously devoid of any molluscs.

In North Holland many new localities of the invasive species *Hygromia cinctella* (Draparnaud, 1801), a Western-Mediterranean land snail, were registered in Purmerend, a small town north of Amsterdam.

In addition, four fortifications belonging to a former defense line encircling Amsterdam and officially placed on the list of historical heritages recognized as such by UNESCO, were surveyed for the presence of molluscs. All these fortifications are declared nature reserves and are usually not open to the public. Publications of the results are in preparation.

Three days were spent at the Zoological Museum of Amsterdam, where the excellent malacological library there was used in order to solve certain problems concerning the taxonomy and nomenclature of some marine molluscs from the Red Sea. Their extensive collections were also consulted in order to compare material from the Red Sea with similar species living in the Indo-Pacific.

I would like to thank the Dutch "Society for Nature Monuments" and the "State Forestry Service" for giving me permission to carry out a mollusc survey on the fortifications falling under their jurisdiction. I also thank my friend and longtime colleague Robert G. Moolenbeek for his hospitality at the Zoological Museum of Amsterdam.
2nd National Malacology Congress of Turkey in Adana including a collecting trip

Henk K. Mienis

I was recently invited to participate in the 2nd National Malacology Congress of Turkey, which took place at Çukurova University in Adana from 8-10 October 2008. The congress was intended to give Turkish zoologists working on molluscs an opportunity to present the results of their studies to an audience of people with similar interests. For some of the students the congress provided a first chance to present their malacological studies. It also provided an opportunity to exchange ideas with colleagues and fellow students.

I was honored to present the opening lecture: "Exotic freshwater molluscs in Israel", on the first day of the congress. During this congress several participants reached various agreements to establish international cooperation or to intensify the existing contacts. Before, during and after the congress I used the opportunity to collect molluscs from 17 different localities. This material now forms part of the Mollusc Collection of the National Collections of Natural History of Tel Aviv University.

The following localities were sampled:

1. Vilayet Adana, Adana, Campus Çukurova University, garden and parkinglot near the guesthouse, 07.10.2008 [37° 03' 25.19" N 35° 21' 05.50" E].
2. Vilayet Adana, Adana, Campus Çukurova University, T-junction 100 m north of the guesthouse, 11.10.2008 [37° 03' 28.12" N 35° 21' 10.30" E].
3. Vilayet Adana, Adana, Campus Çukurova University, in garden of the Dept. Fisheries, 07.10.2008 [37° 03' 36.57" N 35° 21' 15.31" E].
4. Vilayet Adana, Adana, Campus Çukurova University, Seyhan Lake, Balcali side, near restaurant of the marina, 11.10.2008 [37° 02' 48.10" N 35° 20' 38.90" E].
5. Vilayet Adana, Adana, Campus Çukurova University, Seyhan Lake, Balcali side, 200 m north-west of the marina, 11.10.2008 [37° 02' 55.77" N 35° 20' 34.35" E].
6. Vilayet Adana, Adana, Campus Çukurova University, Seyhan Lake, Balcali side, + 500m north-east of the marina, 11.10.2008 [37° 02' 53.59" N 35° 20' 45.24" E].
7. Vilayet Adana, Yumurtalik, Marine-Biological Fisheries Station, in garden on very large flowerbox 10.10.2008 [36° 45' 42.12" N 35° 42' 55.50" E].
8. Vilayet Adana, Yumurtalik, Marine-Biological Fisheries Station, between shrubs near the beach, 10.10.2008 [36° 45' 38.85" N 35° 42' 50.25" E].
9. Vilayet Adana, Yumurtalik, Marine-Biological Fisheries Station, in drift on the beach, 10.10.2008 [36° 45' 41.39" N 35° 42' 59.01" E].
10. Vilayet Adana, Yumurtalik, ± 1 km west of the Marine-Biological Fisheries Station, in tiny saltswamp, 10.10.2008 [36° 45' 32.84" N 35° 42' 36.81" E].
11. Vilayet Adana, Yumurtalik, ± 1 km west of the Marine-Biological Fisheries Station, on stony slope of a hill near the sea, 10.10.2008 [36° 45' 33.42" N 35° 42' 35.03" E].
12. Vilayet Adana, Yumurtalik, in drift on the beach just east of the archaeological site, 10.10.2008 [36° 46' 10.49" N 35° 47' 29.97" E].
13. Vilayet Adana, Yumurtalik, in garden of the Agricultural Highschool of the Çukurova University, 10.10.2008 [36° 46' 37.75" N 35° 47' 33.89" E].
14. Vilayet Adana, Yumurtalik Lagoon, near Deveciusahaan Dalyan, saltswamp and lagoon, 10.10.2008 [36° 44' 47.87" N 35° 38' 05.95" E].
15. Vilayet Adana, Karatas, Magarsus Hotel of the Dept. of Tourism and Hotel Management of the Çukurova University, in garden, 10.10.2008 [36° 35' 45.03" N 35° 26' 29.22" E].
16. Vilayet Içel, Mersin, in garden along the boulevard, 12.10.2008 [36° 46' 48.70" N 34° 36' 05.57" E].
17. Vilayet Içel, Mersin, in drift on the beach east of the sight-seeing jetty, 12.10.2008 [36° 46' 47.33" N 34° 36' 09.79" E].

To date, only the land and freshwater molluscs have been identified. A land snail, *Xerolenta obvia* (Menke, 1828), Fam. Hygromiidae, was recorded for the first time from two localities in the Vilayet Adana: Adana (loc. 1) and Yumurtalik (loc. 8). Of the freshwater mussel *Dreisenna iconica* Schütt, 1991, only known so far from fossil specimens, fresh empty valves were found in drift of the Seyhan Lake near Çukurova University.
New collections

The Paleontological Collection of Dr. Yael Chalifa (1940-2006): Additional publications

Henk K. Mienis

In the previous annual report 2006/2007 we reported about the donation of the Paleontological Collection of Dr. Yael Chalifa.

Additional publications of Yael Chalifa:

During the preparation of the bibliography of the late Dr. Yael Chalifa we have overlooked two abstracts of lectures given during as many annual meetings of the Zoological Society of Israel.

Especially the abstract dealing with fossil teleostean fish from the Gesher Formation (Upper Messinian-Lower Pliocene) of Nahal Hamud, Eastern Lower Galilee, Israel, is important, since it represents the first note concerning fossil fish from that site.


Chapters in the history of the National Collections of Natural History of Tel Aviv University

We continue in our tradition of honoring our scientific forefathers.

Published in Israel Journal of Entomology 2007 (Vol 37, pp. 359-364)
(Modified from an article published in this journal (1985) and honoring Prof. Kugler on the occasion of his 70th birthday)
Amnon Freidberg

Professor Jehoshua Kugler passed away in Tel Aviv on October 24, 2007. He was born in Chortkov, Galicia (then in Austro-Hungary, now within Ukraine) on February 1, 1916, and grew up in Czernowitz (then in Romania, now in Ukraine). In 1934, shortly after matriculating, he emigrated to what was then Palestine. In the same year, almost without any knowledge of Hebrew, he began studying at the Hebrew University of Jerusalem. Within four years, and while struggling with the language, he completed his M.Sc. degree in zoology, with botany and geology as minors. Kugler’s M.Sc. thesis, on the Vespiformes of Jerusalem, supervised by Prof. F. S. Bodenheimer, won the prize of the Science Society of Tel Aviv.

In 1939 Kugler also gained his teaching certificate. From 1939 to 1947 he taught biology at the Agricultural High School and from 1947 to 1960 he taught zoology at the “E. Shein” Teachers’ Training College.
From 1956 to 1960 Kugler worked on a study entitled: “A taxonomic and faunistic study of the tachinid flies of Israel”, at the Hebrew University of Jerusalem and supervised by Prof. O. Theodor, for which he was awarded his Ph.D. In 1954 he joined the then small faculty of the Department of Zoology at the newly-established Tel Aviv University, as a lecturer in zoology. In 1962 he was promoted to senior lecturer; in 1969 to associate professor and in 1979 to full professor. His previous broad experience in teaching also contributed to his activities at the university, and between 1956 and 1969 he taught methodology for high school zoology teachers at the university’s Department of Education. The list of courses he taught since becoming a lecturer at the Department of Zoology has probably surpassed that of any other faculty member. It ranged from such general courses as introduction to the invertebrates, general and faunistic entomology and introduction to taxonomy, to more specialized courses such as social insects, Diptera, aquatic insects and many others.

Although he officially retired in 1988, as a professor emeritus, Kugler maintained his office, continuing to teach for a number of years and carrying on his research right to the end.

Kugler started publishing scientific papers rather late in his career. However, the list of entomological topics and groups dealt with by him is astonishingly wide and seldom attempted by scientists nowadays. The greater part of his research work, following his Ph.D. studies, was devoted to the taxonomy and biology of one family of parasitic flies, the Tachinidae. Before Kugler began his studies, the list of locally known species of this group contained some 30 names. Following his studies, published in about a dozen papers, the list increased to around 300 species, revealing the Tachinidae as one of the largest insect families in the Israeli fauna. Fifty new species and nine new genera of Tachinidae were described in the course of this study. After the Tachinidae, the Chironomidae formed the second group of interest for him. One interesting outcome of his chironomid study was the demonstration of an unusually high
frequency of Afrotropical elements in the freshwaters of the northern Jordan Valley in Israel. This reaches 48% in Lake Kinneret, and 60% in the Hula Nature Reserve, illustrating Israel’s unique zoogeographic location. Kugler’s own interest in the Diptera was not, however, restricted solely to the above-mentioned families. In 1969 he published a comprehensive list of the Muscidae of Israel, a group of considerable economic and medical importance, and in 1978 he published a monograph on the Rhinophoridae of Israel, a small group of parasitic flies of great scientific interest. Twenty-two species were recorded in the latter paper, making Israel one of the richest countries in rhinophorids. Twelve species and three genera were described as new.

His work on the Tachinidae and other groups placed him among the top figures associated with this field in Israel and elsewhere. This work served as a model to several graduate students who, for over 20 years, under his supervision, surveyed various taxa of insects in Israel, manifestly increasing our taxonomic and faunistic knowledge of them. These taxa comprised caddis-flies (Trichoptera), may-flies (Ephemeroptera), ant-lions and their like (Neuroptera), termites (Isoptera) and several families of flies (Chironomidae, Tephritidae, Syrphidae, and Chloropidae). Many species have been named after him in recognition of his contributions to the taxonomic study of insects.

Other areas covered by Kugler’s research and publications included the biology of parasitic wasps, biology of phytophagous insects that feed on weeds, and biology of social wasps. While still working primarily on the Diptera, he maintained both an interest and fondness for the Hymenoptera, and especially the social Hymenoptera. It was this that seems to have led him around 1980 to “abandon” the Diptera and leave the faunistic and taxonomic study of this group in Israel in my hands. He now turned his attention solely to the taxonomy of the ants of Israel, and this was to become his main occupation in the years that followed. He published seven articles on the subject (including the one in this volume).
One of his greatest achievements, and perhaps the greatest, was the compilation and editing of the weighty volume on insects in the *Encyclopedia of the Plant and Animals of the Land of Israel* (Kugler, 1989), to which he devoted about a decade of work and of which he himself wrote about half of the entries. This book (together with the other eleven volumes of the “Encyclopedia”) was sold in tens of thousands copies and immediately became the standard textbook for insect faunistic courses at Tel Aviv University, replacing the American and European English textbooks that had been used there until then.

Most of Kugler’s scientific publications were written in English. However, his proficiency in several European languages allowed him to write several publications in German and French. Despite his initial difficulties in mastering the Hebrew language, he subsequently published many articles, reports and encyclopedia items in Hebrew. These latter publications reflect, once again, his orientation towards the education of the general public.

Kugler both enjoyed field work and considered it as an important part of an approach that also incorporates laboratory work, collections, taxonomy and faunistics, in fostering the study of the whole organism. He led many collecting expeditions in Israel and abroad and after his retirement joined excursions in the field led by others. Two major expeditions, in which we both participated, were to the Sinai (1969) and to Africa (1971–2), and these two, especially the latter, significantly affected my own choice of career.

He constantly involved himself in additional activities both within and outside Tel Aviv University. His interest in higher education drew him, for more than a decade, to chair the committee for graduate studies of the Department of Zoology, during which period he engaged with scores of students and their problems. This led him, in 1973, to chair the faculty committee for M.Sc. studies, a position he held until 1976. In addition, during 1973, he served as deputy dean of the faculty. He also participated and served on other
departmental committees, and his voice was always heard when matters of principle arose.


Although Kugler devoted most of his time to university work and to entomology, he divided what free time he had among a diversity of interests no less varied than those associated with his work. He was a dedicated reader, in several languages, of which Yiddish was a favorite; he enjoyed poetry as well as prose and was also a keen theatre buff. He was interested in internal and foreign affairs and, based on his broad historical knowledge and perspective, he usually expressed strong opinions concerning political events and developments, both in Israel and abroad. His broad knowledge and wit made him enjoyable company, and this was augmented by his endless capacity for telling jokes appropriate to every situation.

Kugler was a devoted family man who, together with his wife Ida, raised their two children, Rachel and Moshe, and also took care of his mother (until her death at the age of 90, in 1976). Together, Ida and he have four grandchildren and three great-grandchildren, the youngest born only a few months ago. We mourn Kugler’s death and wish his family members a long and happy life.

**Jehoshua Kugler’s scientific publications (in chronological order)**


Hanan (Hans) Bytinski-Salz (1903-1986) – Second Addendum
Henk K. Mienis

In order to keep the bibliographic information concerning the publications of Prof. Bytinski-Salz as complete as possible we list here a book review, which has been overlooked so far. In addition we can add three other names to the list of eponyms i.e. taxa named in his honour.

Addition to his bibliography

Additional taxa named after Hanan (Hans) Bytinski-Salz

*Anthidium bytinskii* Mavromoustakis, 1948
*Eriades bytinskii* Mavromoustakis, 1948
*Megachile (Chalicodoma) pyrenaica var. bytinskii* Mavromoustakis, 1949

References


Heinrich Mendelssohn (1910-2002) – Addendum to his bibliography

H.K. Mienis and R. (A.) Landsman

We are able to correct one reference in the list of publications by Prof. Heinrich Mendelssohn (Mienis & Landsman, 2008), while we can add another so far overlooked article.

Reference no. 015. Mendelssohn, H., 1951. [The Crested lark.]* HaSadeh le Noar, 1. (in Hebrew) in the original bibliography has to be changed into:


References

Acknowledgments

Thanking our many friends, colleagues and staunch supporters, is a particular pleasure today. First and foremost, we are very grateful to the former Chair of the Board of Governors of Tel Aviv University, Michael Steinhardt, and to his wife, Judy Steinhardt, for their generosity, friendship, trust, unwavering support, and patience. Their trust in our project has been the foundation of our success.

In our previous Annual Report we expressed our gratitude to the Minister of Environmental Protection, MK Gideon Ezra, and the Director-General of the Ministry, Shai Avital, the Minister of Agriculture and Rural Development, MK Shalom Simhon, and the Director-General of the Ministry, Yael Shaaltiel, the Minister of Tourism, MK Yitzhak Aharonovitch and the Deputy Director-General of the Ministry, Shai Wiener, for their commitment and support for building a home for the National Collections of Natural History and the associated research and public activities. We remain deeply indebted to them, and look forward to continued work with them as well as with other leaders of the Israeli government. We also thank the Minister of Science, Culture and Sport, MK Galeb Majadle and the Ministry's staff for their support of our project as a Knowledge Center. We thank them all for their leadership and vision.

We are very grateful to Guy Samet, Yeshayahu Bar-Or, Menachem Zalutzki, and Yoram Horowits of the Ministry of Environmental Protection, Herzel Avidor and Nimrod Vizansky of the Ministry of Agriculture and Rural Development, Yaron Hirschfeld of the Ministry of Tourism, and David Mendlovic, Avi Anati, Husam Masalha, Esther Tokatli, Shai Israeli, and Idit Amihai of the Ministry of Science, Culture and Sport, for shouldering responsibility on behalf of their ministries and seeing to the support and success of our project, as well as for the good will and support through progress and setbacks. We thank Haran Levaot of the Budgeting Department of the Ministry of Finance for his leadership role in promoting our project.
In the past years we have received financial support as well as support for curatorial positions, and now significant building support from VATAT, the Planning and Grants Committee of the Council of Higher Education of Israel. Moreover, the Head of VATAT, Shlomo Grossman, has been active in helping us raise funds for a proper collections facility. We are very grateful to him, as well as to all VATAT members for their active and constructive role. We also thank the Director-General of VATAT, Steven Stav, and his dedicated staff – Merav Shaviv, Avital Blajwas, Shira Navon, Yael Tur-Kaspa, and Uri Solomonovitz – for their constructive and professional attitude as well as their enthusiasm, kindness, and warmth. We are particularly grateful to Yael Siman-Tov Cohen and to Amir Gat of VATAT for their constant support, commitment, good will, and patience.

The Israel Academy of Sciences and Humanities has been involved for many years in attempts to safeguard the collections and to ensure their academic future. Menahem Yaari, President of the Israel Academy of Sciences and Humanities, and Ruth Arnon, the Vice President, are both involved with and supportive of our project. We are also grateful to Alex Levitzki, former Head of the Science Division of the Israel Academy of Sciences and Humanities for his commitment to promoting biodiversity research and conservation. Yehudith Birk, Chair of the Academy's Steering Committee for the National Collections of Natural History, has guided us time and again with her wisdom and valuable experience; we are, as ever, indebted to her for her patience, commitment, and mentoring, as well as for her hard work to promote this project. Raphael Mechoulam, Head of the Science Division of the Academy, continued his constructive activity towards promoting the collections and we are as ever grateful to him and to the committee members and observers – Reuven Merhav, Oded Navon, Yael Lubin, Ehud Spanier, and Yossi Loya – for their time, support, and initiative. We are also deeply indebted to Yossi Segal who has dedicated so much time, thought, patience, and effort to this project.
We thank Shimshon Shoshani, former member of the Board of Directors of Tel Aviv University, for the benefit of his wisdom, experience, and invaluable help. We thank Gedalya Gal, Avraham (Baiga) Shochat, Reuven Merhav, and Avi Ben-Bassat for sharing their experience in government funding with us and for their constant advice and support. We thank Martin Weyl, a longstanding friend of the collections who has been there for us for some years now for sharing his insights, experience, and expertise with us.

We also thank our many friends in the Israel Nature and Parks Authority who collect specimens and contribute greatly to our efforts to record the natural history of Israel, as well as to our colleagues and friends in other Israeli universities and research institutions, who enrich our collections and provide scientific support.

The collections, faculty, and staff are part of Tel Aviv University that has ever been home and has always supported our endeavors. We thank the present Chair of the Board of Governors, Robert Goldberg, for his enthusiastic support. We are grateful to President, Zvi Galil, for his firm support, commitment, warmth, and leadership, which help bring our project to fruition. We thank our Rector, Dany Leviatan, for his crucial support and academic leadership. We are also grateful to the Vice-Rector, Raanan Rein, for his longstanding support and academic integrity. We thank the new Vice-President for Research and development, Ehud Gazit, for his support of the national collections.

We are deeply indebted to our many friends in Tel Aviv University's administration, whose friendship and support have been invaluable. We thank our Director-General, Moti Kohn, for his wise advice and enthusiastic support; we thank the current and former Vice-Presidents for Development, Gary Sussman and Yehiel Ben Zvi, for their significant efforts on our behalf; we thank Deputy Director-General for Finance, Amit Streit, for his longstanding and invaluable friendship and support, and are grateful to Asaf Ben-Shlush and
Rony Goldstein of the department of Finance for their help; we are grateful to Deputy Director-General for engineering and Maintenance, Ofer Lugassi for his creativity and support, and look forward to our continued work with him and his division in promoting the building; we thank the Director of the Research Authority, Leah Pais, Deputy-Director, Rafi Elishav, Nurit Biron and the rest of the staff of the Research Authority for their friendship, support, and advice at all stages.

We are grateful to our colleagues in the Departments of Zoology, Plant Sciences, Anatomy and Anthropology, and the Institute of Archeology and Ancient Near Eastern Cultures, with whom we teach and collaborate in research, and who are ever ready to support our endeavors.

Nature Campus is a joint project in which the I. Meier Segals Zoological Garden and the Botanic Gardens take an active part. Their directors, Arnon Lotem and now Noga Kronfeld-Schor, and Jacob Garty, are our allies and partners in our efforts to promote science education on the environment.

We acknowledge the support of the Steering Committee of Nature Campus, Chaired by the Dean of Life Sciences, Yoel Kloog, whose members are Lea Pais, Director of the TAU Research Authority, Amit Streit, Director of the Finance Department, Sigal Adar, Director of Friends of TAU, Micha Ilan, Head of the Department of Zoology, Danny Chamovitz, Head of the Department of Plant Sciences, Yoel Rak, Head of the Department of Anatomy and Anthropology, Arnon Lotem, Director of the I. Meier Segals Garden for Zoological Research, and Jacob Garty, Director of the Botanic Gardens. We are also grateful for the enthusiasm and constructive attitude of the members of the Nature Campus Scientific Committee: Danny Chamovitz, Head of the Department of Plant Sciences, Israel Finkelstein from the Jacob M. Alkow Department of Archaeology and Ancient Near Eastern Cultures, Jonathan M. Gershoni, the Department of Cell Research and Immunology, Yoav Gothilf
from the Department of Neurobiochemistry, Abraham Hefetz, Head of the Department of Zoology, Ayala Hochman from the Department of Biochemistry, Arnon Lotem from the Department of Zoology and Director of the I. Meier Segals Garden for Zoological Research, Rafi Nachmias from the Jaime and Joan Constantiner School of Education, Yoel Rak, Department of Anatomy and Anthropology, Eliora Ron from Department of Molecular Microbiology and Biotechnology, and Marcelo Sternberg from the Department of Plant Sciences.

During 2007/2008 Nature Campus activities enjoyed the invaluable financial support of the Ministry of Environmental Protection, Charles and Lynn Schusterman Family Foundation and another private foundation. We appreciate the trust and cooperation of our partners in Nature Campus: Schools from all over Israel; TAU’s Price - Brodie Initiative in Yaffo; The Society for the Protection of Nature in Israel; Israel Nature and Parks Authority; Israel Committee for Man and the Biosphere – UNESCO; and many others not mentioned, still appreciated, with whom we work together.
Publications

The national collections of natural history are an important research infrastructure, used by scientists within and outside of the university. Approximately a decade ago we compiled the list of publications based on our natural history collections, and arrived at over 1200 publication produced by over 550 scientists. This list was incomplete, for technical reasons related to reconstructing this record, and because it did not include the sizable list of publications based upon the anthropological collections. Our current list of the 2007/2008 publications, alas, is also incomplete; it includes all publications of TAU members affiliated with the collections (whether they are directly collections-based or not), and under-represents publications of individuals from other institutions, since our follow-up is far from complete.

Refereed articles


distinguished also by their genetics and ecology. Marine Biology 151:2195-2206.


**Accepted for publication**


17. Dorchin, N. and Freidberg, A. Gall midges (Diptera: Cecidomyiidae) of the Na’aman salt marsh, Israel. *Zootaxa*.


**Books**


**Accepted for publication**


**Chapters in books**


Accepted for publication


Papers presented in scientific meetings

2006 Comparative skeletal features between Homo Floresiensis and patients with Laron Syndrome. XVI Paleopathology Association European Meeting, Santorini, Greece (Hershkovitz, I., Kornreich, L. and Laron, Z.).


2007 44th meeting of the Zoological Society of Israel, Achva College, Israel (Y.Gavrieli).

2007 A novel efficient but inexpensive CO₂ generator based on nanotechnology. 73th Annual Meeting of the AMCA (The American Mosquito Control Association) in Orland, USA (V. Kravchenko).


2007 Biomineralization: from biology to materials (Aarhus, Denmark) (Ilan, M.).


2007 Injuries in young dancers, Age 8 to 16 Years. Surgical and Radiologic Anatomy (Special Issue) - 9th Congress of European Association of Clinical Anatomy, Prague. (Steinberg, N., Siev-Ner, I., Peleg, S., Dar, G., Masharawi, Y., Alperovitch-Najenson, D., Medlej, B. and Hershkovitz, I.).

2007 International Marine Biotechnology Conference (Eilat, Israel) (Ilan, M.).


2007 Radiographic identification of sacroiliac joint bridging: Reliability and validity. Fourth Faculty Research Fair, Faculty of Social Welfare & Health
Studies, Haifa University. (Dar, G., Peleg, S., Masharawi, Y., Steinberg, N., Rothschild, B.M. and Hershkovitz, I.).


2007  The association between sacral inclination and spinal deformities. Seventh Annual Meeting of the Israeli Physiotherapist Society (IPTS), Israel (Peleg, S., Dar, G., Steinberg, N., Masharawi, Y. and Hershkovitz, I.).


2007  The principal and performance of a novel solar powered “carbon-dioxide” mosquito trap. 73th Annual Meeting of the AMCA (The American Mosquito Control Association) in Orland, USA (V. Kravchenko).


2008  Israel spider atlas: advantages and disadvantages. The 3rd meeting of the Israeli Arachnology Group, Ramat Hanadiv, Israel (Gavish-Regev, E.)
2008 Leaf aphids control by the spider *Mermessus denticulatus* with alternative prey. The Negev meeting for agricultural research and development, Eshel HaNashy, Israel (Rotkopf, R., Gavish-Regev, E., Lubin, Y. and M. Coll.).

2008 Multiple Enthesopathies in the human skeleton: what do they tell us about spinal diseases? 17th European Meeting of the Paleopathological Association "Diseases of the Past". Copenhagen, Denmark (Dar, G., Peleg, S., Masharawi, Y., Steinberg, N., May, H. and Hershkovitz, I.).

2008 Pioneer of Paleopathology in Israel. 17th European Meeting of the Paleopathological Association "Diseases of the Past". Copenhagen, Denmark (Hershkovitz, I).


2008 Spider assemblage in arid agroecosystem: patchy landscape, functional groups and spatial movement patterns. The Negev meeting for agricultural research and development, Eshel HaNashy, Israel (Gavish-Regev, E., Lubin, Y. and M. Coll.).


2008  The rise and fall of a coral reef ascidian. 11th International Coral Reef Symposium, Ft. Lauderdale, USA (Shenkar, N.).


2008  45th meeting of the Zoological Society of Israel, Open University, Israel (Y.Gavrieli).

2008  93rd Annual meeting of the Ecological Society of America: Enhancing Ecological Thought by Linking Research and Education, Milwaukee, WI, USA (Y.Gavrieli).

2008  BIOCAPITAL and BIOTECH MARINE workshop (Rovinj, Croatia) (Ilan, M.).


2008  Noctuidae (Lepidoptera) of Mt. Hermon. 7 The 26th Meeting of the Entomological Society of Israel. Hebrew University, Rehovot, Faculty of Agriculture (V. Kravchenko, Chikatunov V. and Pavliček T.).


Graduate students

Much active scientific research is conducted by graduate students. Here we list the graduate students of faculty members affiliated with the National Collections of Natural History at Tel Aviv University. We list also a few graduate students from other institutions of higher education, but names and affiliations of many others from Israel and abroad who used the collections are unknown to us.

PhD students

1999-2008  Liora Glass (E. Geffen and T. Dayan)
The ecology of jungle cats in natural and anthropogenic habitats in Israel.

2000-    Reuvat Nitzan (T. Dayan and A. Ar)
Population dynamics of the chukar partridge in Israel.

2001-2007  N Knopp (I. Hershkovitz)
"Dancer's injuries".

2002-    Yoav Motro (Y. Yom-Tov and U. Safriel)
Mechanisms of biological control of a rodent pest by a nocturnal raptor: the use of barn owls for vole control in Israel.

2002-    Hadass Schteinitz (Y. Yom-Tov and T. Dayan)
Estimating the effect of global warming on the distribution of Israeli animals.

2002-    Hadass Steinitz (T. Dayan and Y. Yom-Tov)
Species and community level investigation of the environmental factors which affect mammal distributions in Israel.

2003-    B. Bahaa (I. Hershkovitz)
Macro and microstructure of the annulus fibrosus.

2003-    Leon Novak (M. Ilan)
Engineering a bacterial expression system to produce large amounts of known and of modified naturally occurring bioactive compounds of pharmacological interest.

2003-2008  Noa Shenkar (Y. Loya)
Bioactivity of Mediterranean and Red sea tunicates.

2003- Merav Weinstein (T. Dayan and A. Hefetz)
Invasive ants of Israel.

2003-2008 Gidon Winters (Y. Loya)
Photoinhibition in corals – effects of UV, PAR and temperature.

2004- Shai Barkan (Y. Yom-Tov and A. Barnea).
Memory of resident and migratory birds.

2004- G. Dar (I. Hershkovitz)
Spondyloarthropathy.

2004- Liat Gahanama (A. Freidberg)
A revision of the *Schistopterum* clade of Schistopterini.

2004- Constantin Grach (A. Freidberg)
Ecology and biology of costal dune insects.

2004- Mati Halperin (Y. Benayahu)
Genetic diversity, demography and behavior of the three-spot dascyllus, Dascyllus trimaculatus Rüppell, in the northern Gulf of Eilat (Red Sea).

2004 - Boaz Mayzel (M. Ilan)
Magnetoreception in sponges.

2005- Rachel Armoza (Y. Loya)
Ecological and physiological aspects of sex hormones in corals.

2005 - D. Blihoghe (M. Ilan)
Natural products from sponge associated microorganisms.

2005- Motti Charter (Y. Leshem)

2005 - M. Haber (M. Ilan)
Biosynthesis and function of Natural products from sponge associated microorganisms.

2005 - Irina Khalfin (M. Ilan)
Function of natural products from sponge associated fungi.

2005 - Yaron Krotman (M. Goren)
Fish biodiversity and ecology in oasis habitats in the Dead Sea Valley.

2005- Tal Levanony (T. Dayan)  
Patterns of biodiversity in natural and cultural landscapes: a model Mediterranean forest ecosystem.

2005- Ofir Levy (T. Dayan and N. Kronfeld-Schor)  
Modeling climate effects on temporally-partitioned rocky desert rodents: from basic principles to community structure.

2005- R. Sarig (I. Hershkovitz)  
Interproximal wear.

2005- Amy Shlesinger (Y. Loya)  
Predator-prey interactions between nudibranchs and their sea-anemone prey.

2005- Orit Skutelsky (T. Dayan and E. Feitelson)  
Biodiversity conservation in biosphere reserves of Israel: the switch from a market led to conservation oriented agriculture.

2005- Assaf Zevoluni (Y. Loya)  
Coral community dynamics in bleached and non-bleached coral reefs (Zanzibar vs. Elat).

2006- Frida Belinky (D. Huchon and A. Lotem)  
Multiple approaches to solve basal metazoan phylogeny and its implication on intron evolution.

2006- O. Hay (I. Hershkovitz)  
Spinal evaluation in Lower Back Pain.

2006- Eran Levin (Y. Yom-Tov and N. Kornfeld).  
Ecophysiology of free-tailed bats.

2006- Lidar Sapir-Hen (T. Dayan and G. Bar-Oz, University of Haifa)  
Animal bones, ancient populations, and site formation processes: A test case of Dor, a coastal Levanite site.

2006- R. Sarig (I. Hershkovitz)  
Interproximal attrition.

2006- Chen Yoffe (Y. Benayahu)
Symbiont transmission in cnidarian hosts: integrated processes and mechanisms determine specificity.

2007-
Y. Aluma (M. Ilan)
Environment impact on sponge-fungi association.

2007-
Emmanuelle Cohen-Shacham (T. Dayan)
Policies for managing ecosystem services

2007-
G. Ibrahim (I. Hershkovitz)
Whiplash.

2007-
Ronit Justo-Hanani (T. Dayan)
Legal and administrative aspects of genetically modified organisms in Israel.

2007-
Aldona Kurzawska (Bar-Yosef Mayer, D.E. and M. Kobusiewicz)
Insight into Hunter-Gatherers’ Life: The Role of Dentalium Shells in Late Epipalaeolithic Sites of the Levant.

2007-
Ido Sella (Y. Benayahu)
Biomaterial from a soft coral

2007-
Roee Segal (Y. Loya)
Toxicological effects of heavy metals on reef organisms.

2007-
Amir Shitenberg (D. Huchon and M. Ilan)
Phylogeny and evolution of demosponges.

2007-
Dror Zurel (Y. Benayahu and U. Gofna)
Lessapsian migrant species as vectors for dispersal of marine bacteria

2007-
Maaya Weizel (Y. Loya)
Novel technology for establishment of totipotent tissues and "immortal" lines of a unique model system.

2008-
J. Abass (I. Hershkovitz)

2008-
Ariella Gotlieb (T. Dayan and Y. Mandelik)
Agriculture and conservation in the Arava Valley

2008-
H. May (I. Hershkovitz)
2008- Noa Sokolover (M. Ilan)
Bryozoans ecology

**MSc students**

Variations within a species - *Bemisia tabaci* (due to parasitic bacteria).

2003- Victoria Semyatich (J. Garty and A. Hochman)
The biochemical response of lichens to environmental stress.

2004- Haim Biala (V. Soroker, The Agricultural Research Organization of Israel)
Ants associated with banana aphids.

2004- Noam Cohen (M. Inbar and I. Izhaki, Oranim Academic College)
The effects of secondary metabolites in nectar on ants.

2004-2007 Michal Meir (A. Freidberg and M. Sternberg)
Flower color variation in the thistle, *Syllibum marianum*.

2004- Adi Ramot (E. Groner and P. Bar, Ben Gurion University)

2004-2008 Shachar Samra (A. Freidberg and D. Gerling)
Biology and taxonomy of selected Parasitica (Hymenoptera).

2004- Daniel Yashunski (M. Goren)
Succession of fish community in planted corals in Elat.

2005- J. Abass (I. Hershkovitz)
Ligamentum flavum and spinal stenosis.

2005-2008 Ada Alamaro (Y. Loya)
Ecological and cellular aspects of color morphs in the coral *Stylophora pistillata*.

2005- Ayelet Dadon (Y. Loya and M. Fine)
Mechanisms of bleaching in the Mediterranean coral *Oculina patagonica*.

2005- Kfir Gaier (M. Goren)
The impact of grazing fish on invertebrate communities in eastern Mediterranean.

2005-2008  Gali Gingold (Y. Yom-Tov and E. Geffen)  
The effect of dogs on gazelles in the Golan Heights.

2005-  Itay Goldfarb (D. Huchon and M. Ilan)  
Identification of new nuclear markers to solve sponge phylogeny.

2005-  Michal Grosovich (Y. Benayahu)  
Habitat partitioning of three azooxanthellate soft corals in Elat (northern Red Sea).

2005-  Nimrod Lazarus (Y. Loya)  
Induction of metamorphosis in nudibranch larvae.

2005- 2008  Mustaga Mahagna (D. Gerling)  
Identity of the whitefly *Aleurolobus marlatti* in Israel and its relationship with *A. niloticus*.

2005-  Osnat Maor (M. Goren)  
Reproductive biology the cyprinid fish Garra rufa in the Jordan River basin.

2005-  H. May (I. Hershkovitz)  
Hyperostosis Frontalis Interna.

The Genetic Structure of the Green Turtle (*Chelonia mydas*) Population along the Mediterranean Coast of Israeli, and Interactions between Human and Marine Turtle in Ancient Civilizations.

2005-2008  Erez Maza (T. Dayan)  
Climate and land-use patterns in biodiversity.

2005-2008  Ido Mizrachi (Y. Loya)  
Sclerochronology of bleached and non-bleached corals.

2005-  Oren Shelef (E. Groner and M. Shachak, Ben Gurion University)

2005-  Tamir Shelhav (E. Groner and M. Shachak, Ben Gurion University)

2005-  Rosin Shemesh (Y. Loya and E. Rosenfeld)
Possible causes of white band disease in Faviid corals at Elat.

2005- Ina Stierberg (T. Dayan)
Climatic gradients in biodiversity.

2005-2008 Maya Weizel (Y. Loya)
Bleaching patterns in a Red Sea scleractinian coral population.

2005-2008 Rafi Yaabetz (Y. Loya)
Reproductive cycle of a nudibranch.

2005- Kineret Yoktan (Y. Yom-Tov )
Phylogeography of the orange-tufted Sunbird Nectarinia osea.

2006- Frida Belinky (D. Huchon and A. Lotem)
Metazoan phylogeny and its implications for genome evolution.

2006- O. Bergman (M. Ilan)
Sponge farming for natural products.

2006- Gilad Friedman (Y. Yom-Tov and Y. Leshem).
The biology of the long-legged buzzard Buteo rufinus in Israel.

2006- Yael Hollender ((T. Dayan and Y. Mandelik)
The interaction of commercial pollinators and natural bee communities in the central Arava region.

2006- Z. Kochva (M. Ilan)
Sponge associated bacteria and their role in production of natural products.

2006- Shay Rotich (T. Dayan)
The effect of artificial illumination on a rocky desert rodent community.

2006- Bat Sheva Rotman (M. Goren)
The biology the balitorid fish Nemacheilus jordanicus in the Jordan River basin.

2006- Denise Samsonovich (Y. Benayahu and G. Zilman)
Hydrodynamics and settlement of marine larvae.

2006- Karin Tamar (T. Dayan)
Archeozoology of Tel Bet Shemesh.
2006- G. Tirosh (M. Ilan)
Sponge community in the Israeli Mediterranean coast.

2006- Michal Weis (Y. Benayahu)
Bivalves as colonizers of artificial marine structures at Eilat (Red Sea).

2007- Hagit Alphandary (M. Goren and Prof. Henig)
Analysis of decision making process in the case of Kishon River

2007- Hagar Ben-Bassat (Bar-Yosef Mayer, D.E. and A. Gilboa)
Beads and Pendants at Tel Dor During the Early Iron Age: Origin, Technology and Social Perspectives.

2007- Eyal Bloche (T. Dayan)
The effects of physical state perception on decision making in foraging.

2007- Omri Bronstein (Y. Loya)
Bioerosion of reef corals by sea urchins.

2007- Nir Ezra (D. Huchon)
Phylogeny and evolution of the demosponge family Poecilosclerida.

2007- Slava Feldman (Bar-Yosef Mayer, D.E. and S. Shalev)
Connections between Cyprus and the Levant during the Pre Pottery Neolithic B based on beads movements.

2007- Tamar Marcus (T. Dayan)
Spatial aspects of climate change and conservation.

2007- Dafna Meirovich (Y. Benayahu)
Soft corals of the family Xeniidae at Eilat.

2007 - Shachtman, Y. (M. Ilan)
Sponge associated *Archaea*

2007 - Shiratzki, E. (M. Ilan)
Sponge pathogenic microorganisms

2007- Naomi Shifris (Bar-Yosef Mayer, D.E. and A. Gilboa)
The Phoenician Iron Age II bead assemblage: The Achziv Cemeteries as a Test case.
2007- Miri Taub (Goren M.)
The impact of recreation activity on the biota in inland aquatic habitats.

2008- Albag, O. (M. Ilan)
Biology of Topsentia aqabaensis.

2008- Matan Ben Ari (D. Gerling)
Bionomics of the whitefly Diauleurolobus rhamni in the Judean hills.

2008- Roni Lee (Goren M.)
Comparative study of reproductive aspects of invaders and native fish in Eastern Mediterranean.

2008- Y. Paker (Y. Yom-Tov, A. Barnea and T. Alon-Mozes)
The wildlife in urban gardens

2008- Ittai Renan (A. Freidberg and P. Bar-Yekutiel)
The effect of dune stabilization on arthropod communities in the Western Negev

Post-doctoral fellows

2008-2009 Efrat Gavish (T. Dayan)
2008- Noa Shenkar (Y. Loya)
Fellowships and grants

Support for collections-based research is provided by fellowships and grants. Here we list the fellowships and grants of faculty members of Tel Aviv University who are affiliated with the collections. Needless to say, the many colleagues from other research institutions in Israel and abroad also receive fellowships and grants that hinge, at least in part, on work in the natural history collections. These data, however, are not available to us.

While these fellowships and grants and others cannot support collections maintenance, they are crucial for collection development since they provide the funds for active collecting, which are otherwise unavailable in the State of Israel. We do our best to help scientists use the collections and to promote collections-based biodiversity research.


2002- On-going grant from the Nature and Parks Authority to "rescue" insects on the Golan and Hermon (V. Chikatunov and A. Freidberg).


2003-2010 The World Bank/UNESCO/IOC International Targeted Group of Experts on "indicators of coral bleaching". A group which is composed of 15 scientists as follows: from USA (3) Hawaii (1), England (2), Australia (2), Kenya (3), Israel (1), Philippines (1), Mexico (1) and France (1). The group meets and works together 2-3 weeks every year at 4 reef sites: Heron Island (Great Barrier Reef, Australia), Puerto Morelos (Mexico), Philippines (exact location to be determined) and Zanzibar (Y. Loya Co-Chairman with Prof. O. H. Guldberg).

2004-2007 Grant from the Israel Scientific Foundation. Exploitation and hunting patterns of Mountain Gazelle (*Gazella gazelle*) and Persian Fallow Deer (*Dama mesopotamica*) during the Late
Pleistocene - Early Holocene of the Southern Levant: Testing the hypothesis of cultural control (3 year grant; ca. $30,000 per annum (G. Bar-Oz and T. Dayan [C.I.]).


2005-2007 Resolving the higher-level phylogeny of rodents using nuclear genes and SINEs retrotransposons. The United States-Israel Binational Science Foundation (start-up grant program) ($30,000 per year) (D. Huchon and R.W. DeBry).

2005-2008 GLOWA Jordan River research grant: Modeling the impact of global climate change on terrestrial biodiversity in the Jordan River Basin: Testing planning scenarios and climate change scenarios (3 year grant; ca. EURO 35,000 per annum) (T. Dayan, P.I. of subproject).

2005-2008  Ministry of Agriculture, Milk Board grant to work on *Atherigona soccata*, a pest of sorghum (3 years) (A. Freidberg).


2005-2009  The Israel Science Foundation (488/05); 4 years. Vocalization as an indicator of individual quality in the rock *hyrax* ($180,000) (O. Mokady, E. Geffen and M. Kam).

2006-2010  Sponge (Metazoa: Porifera) phylogenetics using novel molecular markers. The Israel Science Foundation (NIS 270,000 per year). (D. Huchon).


2006-2007  Has habitat fragmentation and rainpools geographic distance caused genetic variation among populations of the Syrian spadefoot toad Pelobates syriacus syriacus in Israel? Israel Nature Reserve and Parks Authorities. 80,000 NIS (S. Gafny and A. Freidman).


2006-2008  Bridging the Rift Foundation research grant. Biodiversity in human-dominated landscapes in the Arava Rift Valley (2 years of post-doctoral fellowship [T. Dayan and Y. Mandelik] at $22,000 per annum plus $25,000 per annum for research).

2006-2008  German-Israeli Foundation for Scientific Research and Development grant: Patterns of biodiversity in natural and cultural landscapes: a model Mediterranean forest ecosystem (3 year grant; total sum EURO 158,000) (T. Dayan and T. Assmann).


2006-2009  Israel Science Foundation research grant. Animal bones, ancient populations, and site formation processes: A test case of Dor, a
coastal Levanite site (3 year grant; 225,000 NIS [ca. $50,000] per annum) (T. Dayan and G. Bar-Oz C.I.)

2006-2010 Israel Science Foundation (M. Ilan, S. Carmeli and O. Yarden).

2007 Ministry of Environment (P.I.). For developing website content on invasive species. 18,000 NIS ($5,200) (Y. Gavrieli).


2007 Nature Reserves Authority. The impact of tourism on aquatic biota (M. Goren).

2007 Ministry for Environmental Protection research grant ("The impact of the little fire ant *Wasmannia auropunctata* on arthropod biodiversity in Israel") (1 year grant; 93,000 NIS [ca. $22,000]) (T. Dayan and A. Hefetz).


2007 Fingerhot Karol and Lionora foundation: The role of ligamentum flavum in Spinal stenosis (I. Hershkovitz)


2007/2008 Ministry of Science, Culture & Sport research grant ("Biodiversity in agro-natural landscapes: Maintaining biodiversity and pollination services in arid ecosystems") (1 year grant; 175,000 NIS [ca. $40,000]) (T. Dayan and A. Hefetz C.I.)

2007-2009 Phylogenomics of Urochordata and its application for detecting evolutionary shifts in vertebrate proteins. The High Council for Scientific and Technological Cooperation between France-Israel (#3-3449) [(P.I., NIS 217,500 for two years) D. Huchon and Y. Loya and Emmanuel J. P. Douzery (P.I. € 60,000 for two years)].

2007-2010 Israel Science Foundation (ISF). Inferring the phylogeography and colonization history of the orange-tufted sunbird. (Y. Yom-Tov).
2008 Dan David prize to outstanding post-doctoral students of exceptional promise given for the future time dimension in the field of geosciences (Shenkar, N.).

2008 Grant from the USDA to collecting and identifying the insects on Arundo donax (D. Gerling).

2008 Misliya cave project: Dan David Foundation (I. Hershkovitz).

2008 The root of violence: Israel Palestinian Science Foundation (I. Hershkovitz).

2008 The structure and function of the vertebral epiphyseal ring: Israel Science Foundation (I. Hershkovitz).

2008-2010 Israel-Italy R&D project. The impacts of biological invasions and climate change on the biodiversity of the Mediterranean Sea (Goren, M. and Galil, B.).


Awards

1996- The Dr. Israel Cohen Chair in Environmental Zoology (Y. Yom-Tov).

1997- The Raynor Chair in Environmental Conservation Research at Tel Aviv University (Y. Loya).

1999- The Igor Orenstein Chair for Gerontological Research at Tel Aviv University (Y. Rak)

Public service

1953- Member of the Zoological Society of Israel (L. Fishelson).
1965- Member of the Zoological Society of Israel (Y. Yom-Tov).
1970- Member of the American Society of Ichthyologists and Herpetologists (L. Fishelson).
1970- Member of the Israel Ecological Society (M. Goren).
1970- Member of the Zoological Society of Israel (M. Goren).
1971- Honorary Associate, Dept. of Malacology, Zoological Museum Amsterdam, Amsterdam, the Netherlands (H.K. Mienis).
1972- Member of the Entomological Society of Southern Africa (A. Freidberg).
1973- Member of the IAL (International Association for Lichenology) (J. Garty).
1973- Member of the Israel Zoological Society (Y. Benayahu).
1973- Member of the The Israel Ecological Society (J. Garty).
1975- Member of the Israel Ecological Society (L. Fishelson).
1976- Curator of the Fish collection, Zoological Museum, Tel Aviv University (M. Goren).
1976- Member of the Entomological Society of Israel (A. Freidberg).
1977- Member of the Sociedad Argentina de Botánica (S. Blumenfeld).
1977- Member of the Intecol - International Ecological Society (L. Fishelson).

1978- Member of the La Societe Francais d'Ichthyologie (M. Goren).

1979- Member of the editorial board of Marine Ecology Progress Series (Y. Loya).

1979- Member of the Entomological Society of Washington (A. Freidberg).

1980- Member of the International Crustacean Society (B.S. Galil).


1981- Israel Anthropological Society (Hershkovitz I.).

1981- Israel Society for Anatomical Sciences (Hershkovitz I.).

1981- Member of the Israel Society for Electron Microscopy (J. Garty).

1982- Member of the Advisory Board of the Israel Journal of Zoology (Y. Yom-Tov).

1982- Member of the European Ichthyological Union (M. Goren).

1982- Member of the European Union of Ichthyologists (L. Fishelson).

1983- Curator of the Invertebrate collections, Zoological Museum, Tel Aviv University (Y. Benayahu).


1984- Member of the Israel Zoological Society (M. Ilan).

1984- European Anthropological Association (I. Hershkovitz).

1984- Israel Prehistoric Society (I. Hershkovitz).

1985- Curator of the Entomological collections, Zoological Museum, Tel Aviv University (A. Freidberg).

1985- Member of the Biological Society of Washington (B.S. Galil).

1985- Member of the Committee for Fauna and Flora of Israel - The Israel Academy of Sciences and Humanities (M. Goren).
1985- Member of the Israel Society for Aquaculture (M. Goren).
1986 - Member of the Board of the Regional Central Asia Committee of Stratigraphy (O. Orlov-Labkovsky).
1986- Member of the editorial board of Marine Biology (Y. Loya).
1986- Member of the International Society for Reef Studies (Y. Benayahu).
1986- Member of the Israel Society for Ecology and Environmental Quality Sciences (B.S. Galil).
1986- Member of the the Botanical Society of Israel (J. Garty).
1986- Member of the Zoological Society of Israel (T. Dayan).
1986- Member of the Asociacion Argentina of Micología (S. Blumenfeld).
1987- Curator of Birds and Mammals, Zoological Museum, Tel Aviv University (Y. Yom-Tov).
1987- Member of the Israel Society of Prehistory (T. Dayan).
1987- Member of the International Society for Reef Studies (USA) (M. Ilan).
1988- Member of the Ecological Society of America (T. Dayan).
1988- Member of the Fauna and Flora Committee, Israel Academy of Sciences and Humanities Curator of Birds and Mammals (Y. Yom-Tov).
1988- Member of the Israel Society for Ecology and Environmental Quality (Y. Benayahu).
1988- Member of the Society of Invertebrate Reproduction (Y. Benayahu).
1989- Paleoanthropology Society (Hershkovitz I.).
1989- Pre-clinical Advisor for New York Program medical students (Y. Rak)
1990- Deutsche Gesellschaft für Tropenoekologie (A. Freidberg).
1990- Member of the American Society of Mammalogists (T. Dayan).
1990- Member of the Entomological Society of Israel (A. Ionescu)
1990- Member of the International Council of Archaeozoology (T. Dayan).
1990- Member of the International Ornithological Committee (Y. Yom-Tov).
1990- Member of the Pacific Science Association (Y. Benayahu).
1990- Member of the Society of Vertebrate Paleontology (T. Dayan).
1990- Member of the Zoological Society of Israel (B.S. Galil).
1991 Member of the Sociedad Chilena de Fitopatología (S. Blumenfeld).
1991- Smithsonian Institution Entomology, Research Associate (A. Freidberg).
1991- Member of the Ichthyological Society of Japan (M. Goren).
1991- Member of the scientific council of MEDIFAUNE (Mediterranean fauna data bank), Universite de Nice, France (B.S. Galil).
1992- Member of the Society for Research on Coelenterates (USA) (M. Ilan).
1992- Member of the Board of Publications, Senckenberg Institute, Germany (L. Fishelson).
1992- Member of the Editorial Board of "Vie Marine" (B.S. Galil).
1993- Member of the Ecology Graduate Program Committee, Faculty of Life Sciences, Tel Aviv Univ (T. Dayan).
1993- Member of the Israel Society for the Study of the Origin of Life (IL-SOL) (J. Garty).
1993- Member of the IUCN Canid Specialist Group (E. Geffen).
1993- Paleopathology Association (Hershkovitz I.).
1993- Scientific Advisor to the Yarqon River Authority (M. Goren).
1994  Member of the Asociacion Latinoamericana de Micología (S. Blumenfeld).
1994  Member of the Asociacion Micológica Carlos Spegazzini (S. Blumenfeld).
1994- Dental Anthropology Association (Hershkovitz I.).
1994- Member of the American Association of Anatomists (L. Fishelson).
1994- Member of the Curriculum Committe (Y. Rak)
1994- Research Associate of the Oceanographic Research Institute, Durban, South Africa (Y. Benayahu).
1995- American Associations of Physical Anthropology (Hershkovitz I.).
1995- Human Biology Association (Hershkovitz I.).
1995- Member of the American Society for Integrative and Comparative Biology (Y. Benayahu).
1995- Member of the Director of the National Collections of Natural History at Tel Aviv University (T. Dayan).
1995- Member of the Fisheries Society of Africa (M. Goren).
1995- Member of the Societa Italiana di Biologia Marina (B.S. Galil).
1996- Editor of the Journal of International Wildlife Law and Policy, Corresponding (M. Ilan).
1996- Curator of the Crustaceans Collection, Zoological Museum, Tel Aviv University (B.S. Galil).
1996- Member of the American Microscopical Society (Y. Benayahu).
1996  Member of the Russian Entomological Society (Zonstein, S.).
1997  Member of the Entomological Society of Israel (Friedman, A.L.L.)
1997- Member of the International Society for Research on Symbiosis (USA) (M. Ilan).
1997 – Member of the Paleontological Society of Uzbekistan (O. Orlov-Labkovsky).
1997- Member of the scientific steering committee of the Institute for Nature Conservation Research (M. Ilan).

1997- Adopting a scientist for a Shapiro Stipend, Prof. A. Lehrer (A. Freidberg).

1997- Chair of the Raynor Chair for Environmental Conservation Research, Tel Aviv University (Y. Loya).

1997- Member of the Advisory Board of “Tropical Zoology” (B.S. Galil).

1997- Member of the British Ornithologists' Union (Y. Yom-Tov).

1998- Scientific co-convenor of DIVERSITAS (An international programme of Biodiversity Science) STAR element 9 on “Inventory and Monitoring of Inland Water Biodiversity” (M. Goren).


1998- Member of the American Fisheries Society (M. Goren).

1998- Member of the Departmental Committee, Department of Zoology, Tel Aviv University (T. Dayan).

1998- Member of the Entomological Society of Israel (M. Guershon).

1999- Co-Chair of the committee for Fauna and Flora of Israel - The Israel Academy of Sciences and Humanities (M. Goren).


1999- Member of the Society of Systematic Biologists (D. Huchon).

1999- Appointed incumbent of the Igor Orenstein Chair for the Study of Aging (Rak, Y.).
1999- Member of the Board of Directors of the Inter-university Institute (IUI), Elat (Y. Benayahu).

1999- Member of the Committee for terms in ecology and environmental quality, The Academy for Hebrew Language (Y. Benayahu).

1999- Member of the Editorial Board of “Biological Invasions” (B.S. Galil).

1999- Member of the International Society for the Study of the Origin of Life (ISSOL) (J. Garty).

1999- Member, National Committee for the environmental curriculum in high schools (L. Fishelson).

2000 - Member of the steering committee of the Department of Biology, Israel Oceanographic and Limnological Research, Haifa (M. Ilan).

2000- Member of the Japanese Coral Reef Society (Y. Benayahu).

2000- Adopting a scientist for a Gil’adi program (A. Freidberg).

2000- Director of Nature Campus, Tel Aviv University, Tel Aviv (Y. Gavrieli).

2000- Member of the Academic Planning Committee, Tel Aviv University (Y. Loya).

2000- Member of the Board of Directors of the Inter-university Institute (IUI), Elat (Y. Loya).

2000 Member of the International Society of Arachnology (Zonstein, S.).

2000- Member of the Israel Society for Oxygen and Free Radical Research (J. Garty).

2000- Member of the Scientific Advisory Board of the International Institute (Peoples) (T. Dayan).

2000- Member of the Scientific Review Board - Coral bleaching Project, Research Institute for the Subtropics (RSI), Okinawa, Japan (Y. Loya).

2000- Member of the Zoological Society of Israel (R. Ben-David-Zaslow).
2001 - Member of the European Union of Geosciences (O. Orlov-Labkovsky).

2001 - Member of Man and Biosphere Committee, UNESCO (Y. Gavrieli).

2001 - Co Chairman -International Targeted working group on coral bleaching under the auspices of the World Bank, in collaboration with IOC/UNESCO (Y. Loya).


2001 - Head of the National Center for High Throughput Screening of Novel Bioactive Compounds (M. Ilan).

2001 - Member of the Board of Directors, Society for the Protection of Nature in Israel (Y. Yom-Tov).

2001 - Member of the Chair of the Israel MAB (Man and Biosphere) UNESCO Committee (T. Dayan).

2001 - Member of the International Council of Museums (Y. Gavrieli).

2001 - Member of the Israel Council of Museums (Y. Gavrieli).

2001 - Member of the Israel IGBP (International Geosphere Biosphere Program) Committee (T. Dayan).

2001 - Member of the Museum Committee (Chair), Department of Zoology, Tel Aviv University (T. Dayan).

2001 - Member of the Steering Committee for Nature Campus, Public Programs, Exhibitions and Education at the National Collections of Natural History, the I. Meier Segals Garden for Zoological Research and the Botanic Gardens (T. Dayan).

2001 - Member of the UNESCO World Heritage Committee, Israel (T. Dayan).

2002 - Board member of the Water Environment Forum, Israel Water Association (S. Gafny).

2002 - Member of the Entomological Society of Israel (Zonstein, S.).

2002 - Member of the Geological Society of Israel (O. Orlov-Labkovsky).
2002 – Member of the International Paleontological Association (O. Orlov-Labkovsky).

2002- Member of the Sociëta Lichenologica Italiana (Honorary member) (J. Garty).


2002- Member of the Department Committee in the Department of Zoology (Y. Benayahu).

2002- Member of the editorial board of Marine Pollution Bulletin (Y. Loya).

2002- Member of the Society for Conservation Biology (T. Dayan).

2003- Curator of the Molecular Systematics collections, Zoological Museum, Tel Aviv University (D. Huchon).

2003- Chair of the National Biodiversity Planning sub-committee for education and public awareness. (Y. Gavrieli)


2003- Member of the Board of Directors of the Nature and National Parks Protection Authority of Israel (INPA) (B.S. Galil).

2003- Member of the Great Rift Valley task force of the UNESCO World Heritage Committee (T. Dayan).

2003- Member of the Israeli Society for aquatic research (M. Goren).

2003-2007 Member of the Board of Directors of the Nature and National Parks Protection Authority of Israel (INPA), and Chair of the Science Committee of the Board (T. Dayan).

2004 - Member of the Society for Conservation Biology (Y. Gavrieli).


2004- Chair of the Strategic Planning Committee for the Open Lands Institute on behalf of Yad Hanadiv Foundation (T. Dayan).
2004- Editor in Chief of Electronic Journal of Ichthyology (M. Goren).

2004- Member of the Advisory Committee on "Man and the Environment", Yad Yizhak Ben-Zvi (T. Dayan).

2004- Member of the Central Nomination Committee of Tel Aviv University (Y. Loya).

2004- Training Mrs. Valeria Spliasky of The Plant Protection and Inspection Services in taxonomy and taxonomic methodology of Aleurodidae. Jointly launching a website on the Aleurodidae of Israel (Presently only in the PPRI site, in the future it will also appear in our museum’s site) (D. Gerling).

2004-2007 Member of the National Parks and Nature Reserves Council of Israel (T. Dayan).

2004-2008 Head, Department of Anatomy and Anthropology, Sackler Faculty of Medicine, Tel Aviv University (Rak, Y.).

2004-2008 Member of the steering committee of the Red Sea monitoring program. Ministry of the Environment (M. Ilan).

2005- Chair, Council for the Open Lands Institute on behalf of Yad Hanadiv Foundation (T. Dayan).


2005- Co-chair (with J. Gershoni) of the Nature Campus Science Committee, TAU (T. Dayan).

2005- Head of the Faculty of Life Sciences Graduate School (M. Ilan).


2005- Member of the Invasive Species Scientific Committee, IUCN (B.S. Galil).

2005- Member of the steering committee for the National Collections of Natural History, under the auspices of the Israel National Academy of Sciences and Humanities (T. Dayan).

2006- Member of the national committee for an interuniversity M.Sc. program in Marine Sciences (M. Ilan).
2006- Member of the review committee, Ford Motor Company Conservation and Environmental Grants (Y. Gavrieli).
2006- Member of the Zoological Society of Israel (D. Huchon).
2006- Co-chair, Forum on Biodiversity and the Environment, under the auspices of the Israel Academy of Sciences and Humanities (T. Dayan).
2006- Member of CenSeam: a Global Census of Marine Life on Seamounts (part of the worldwide Census of Marine Life, CoML (B.S. Galil).
2006- Member of the American Society of Limnology & Oceanography (M. Ilan).
2006- Member of the Editorial Board of “Aquatic Invasions” (B.S. Galil).
2006- Member of the European Society for Marine Biotechnology (M. Ilan).
2006- Member of the Teaching committee of the Inter-University Institute - Eilat (M. Ilan).
2006-2008 Head, Porter Scholl of Environmental Studies (Y. Benayahu).
2007- Editor of - Open Oceanography Letters (M. Ilan).
2007- Editor of - Open Oceanography Reviews (M. Ilan).
2007- Editor of - The Open Oceanography Journal (M. Ilan).
2007- Head of the Department of Zoology (M. Ilan).
2007- Member of a Public Council for the Environment to work in conjunction with the Environmental Lobby of the Knesset and member of the Steering Committee of this Council (T. Dayan).
2007- Member of a team to provide guidelines to the Israeli government on biodiversity and adaptation to climate change (T. Dayan).
2007- Member of the Editorial Board of the Open Ecology Journal (T. Dayan).
2007 - Member of the Zoology Departmental technical committee (A. Freidberg).

2008 - Member of the expert team prepared the Mediterranean marine Fish Red List organized by IUCN (The World Conservation Union) (Goren M.).

2008 - Head of the steering committee of the national interuniversity center of excellence in Marine Sciences (M. Ilan).

2008 - Member of the Ecological Society of America (Y. Gavrieli).

2008 - Elected to the Israel Academy of Sciences (Rak, Y.).

2008 - Member of the editorial board of The Open Ecology Journal (T. Dayan).

2008 - Organizing committee of Drylands, Deserts and Desertification 2008, an international congress at the Sde Boqer Desert Research Institute (T. Dayan).

2009 - Member of the Board of Directors of the Society for the Protection of Nature in Israel (SPNI) (T. Dayan).
Visiting scientists at the National Collections

The attached list includes visitors from institutions other than Tel Aviv University who came personally to use the natural history collections of Tel Aviv University in the past academic year. Much use is made of the collections by additional scientists who did not visit them in person. Some scientists get identification services for their research projects and others have lists of specimens and locations mailed to them for various types of research. Moreover, during this period numerous parcels containing scientific materials were mailed abroad for researchers in their home institutions.

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institute</th>
<th>Country</th>
<th>Taxonomic group</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 Oct</td>
<td>J. A. Byers</td>
<td>US Arid-Land Agricultural center, USDA-ARC, Manicopa, Arizona, USA</td>
<td></td>
<td>Entomology</td>
</tr>
<tr>
<td>2007 Oct</td>
<td>A. Abu Ras</td>
<td>Hebrew University</td>
<td>Israel</td>
<td>Fish</td>
</tr>
<tr>
<td>2007 Nov</td>
<td>E. van den Brik</td>
<td>Israel Antiquity Authority</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2007 Dec</td>
<td>O. Hazofe</td>
<td>Israel Nature and Parks Authority</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2007 Dec</td>
<td>D. Rotem</td>
<td>Israel National Parks Authority</td>
<td>Israel</td>
<td>Mammals</td>
</tr>
<tr>
<td>2007 Dec</td>
<td>E. Sheffer</td>
<td>IOLR - Haifa</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2007 Dec</td>
<td>I. Ktalav</td>
<td>Israel Antiquity Authority</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2008 Jan</td>
<td>Z. Brosh</td>
<td>Israeli Air Force</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Jan</td>
<td>Channel 1</td>
<td>Israeli T.V.</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Jan</td>
<td>O. Tal</td>
<td>Tel Aviv University</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2008 Feb</td>
<td>Z. Ben-David</td>
<td>PPIS, Ministry of Agriculture</td>
<td>Israel</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Feb</td>
<td>G. Sabatinelli</td>
<td>University of Rome</td>
<td>Italy</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Feb</td>
<td>Z. Brosh</td>
<td>Israeli Air Force</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Feb</td>
<td>Bird Watching Center</td>
<td></td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Feb</td>
<td>I. Poner-Koks</td>
<td></td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Institute</td>
<td>Country</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
<td>------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>D. W. Wrase</td>
<td></td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>G. Wagner</td>
<td></td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>D. Kasparyan</td>
<td>Zoological Institute, St. Petersburg</td>
<td>Russia</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>M. Gros</td>
<td>Tel Aviv University</td>
<td>Israel</td>
<td>Mammals</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>Z. Brosh</td>
<td>Israeli Air Force</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>S. Kislev</td>
<td>Petach Tikva Museum</td>
<td>Israel</td>
<td>Mammals, Birds</td>
</tr>
<tr>
<td>2007 Mar</td>
<td>U. Galili</td>
<td>Israel Antiquity Authority</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2008 Mar</td>
<td>M. Tom</td>
<td>IOLR - Haifa</td>
<td>Israel</td>
<td>Fish</td>
</tr>
<tr>
<td>2008 Apr</td>
<td>D. Kasparyan</td>
<td>Zoological Institute, St. Petersburg</td>
<td>Russia</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Apr</td>
<td>S. Patiny</td>
<td>Gembloux University</td>
<td>Belgium</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Apr</td>
<td>N. Dorchin</td>
<td>Museum Koenig, Bonn</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Apr</td>
<td>Z. Brosh</td>
<td>Israeli Air Force</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Apr</td>
<td>E. Shani</td>
<td>Society for the Protection of Nature in Israel</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 May</td>
<td>S. Patiny</td>
<td>Gembloux University</td>
<td>Belgium</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 May</td>
<td>Z. Brosh</td>
<td>Israeli Air Force</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 May</td>
<td>Z. Orlin</td>
<td>I.M.S.</td>
<td>Israel</td>
<td>Molluscs</td>
</tr>
<tr>
<td>2008 Jun</td>
<td>G. Sabatinelli</td>
<td>University of Rome</td>
<td>Italy</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Jun</td>
<td>A. Haber</td>
<td>University of Chicago</td>
<td>USA</td>
<td>Mammals</td>
</tr>
<tr>
<td>2008 Jun</td>
<td>E. Spanier</td>
<td>Hebrew University</td>
<td>Israel</td>
<td>Crustaceans</td>
</tr>
<tr>
<td>2008 Jun</td>
<td>Y. Chakra</td>
<td></td>
<td>Israel</td>
<td>Mammals</td>
</tr>
<tr>
<td>2008 Jun</td>
<td>O. Hazofe</td>
<td>Israel Nature and Parks Authority</td>
<td>Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>2008 Aug</td>
<td>L. Rybalov</td>
<td>Russian Academy, Moscow</td>
<td>Russia</td>
<td>Entomology</td>
</tr>
<tr>
<td>2008 Sep</td>
<td>L. Rybalov</td>
<td>Inst. of Ecology and Evolution, Russian Academy, Moscow</td>
<td>Russia</td>
<td>Entomology</td>
</tr>
</tbody>
</table>
Support for academic and other courses

The natural history collections are university-based and, as such, their role is also to promote higher education. Some courses are TAU courses, several of which are our compulsory first and second year courses, taught to hundreds of students; however, other universities (Technion, University of Haifa, Open University) use our facilities for their specialized courses, as does the Avshalom Institute. Many Nature Campus activities also take place using the collections for varied audiences.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Name</th>
<th>Institute</th>
<th>Taxonomic group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insects the Flagship of Biodiversity (academic course)</td>
<td>A. Freidberg and D. Simon</td>
<td>Tel Aviv University</td>
<td>Entomology</td>
</tr>
<tr>
<td>Faunistica (academic course)</td>
<td>Z. Arad</td>
<td>Technion</td>
<td>Birds, Mammals and Museum Class</td>
</tr>
<tr>
<td>Vertebrates Anatomy (academic course)</td>
<td>D. Eilam, M. Ovadia and U. Oron</td>
<td>Tel Aviv University</td>
<td>Reptilia, Mammals and Taxidermist</td>
</tr>
<tr>
<td>Animal Behavior</td>
<td>I. Golani</td>
<td>Tel Aviv University</td>
<td>Mammals and Museum Class</td>
</tr>
<tr>
<td>Introduction to Animal Kingdom: Invertebrates and Vertebrates (academic course)</td>
<td>M. Ovadia and A. Gasith</td>
<td>Tel Aviv University</td>
<td>Mammals and Entomology</td>
</tr>
<tr>
<td>The Invertebrates: Comparative Functional Biology (academic course)</td>
<td>M. Ilan, Y. Benayahu and A. Abelson</td>
<td>Tel Aviv University</td>
<td>Invertebrates, Entomology and Histology</td>
</tr>
<tr>
<td>Human Evolution: fossil evidences (academic course)</td>
<td>Y. Rak</td>
<td>Tel Aviv University</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Osteology And Anthropology (academic course)</td>
<td>I. Hershkovitz</td>
<td>Tel Aviv University</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>---------------</td>
<td>------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Physical Anthropology (academic course)</td>
<td>Y. Rak</td>
<td>Tel Aviv University</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Chapters in Human Evolution (academic course)</td>
<td>Y. Rak</td>
<td>Tel Aviv University</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Ichthyology (academic course)</td>
<td>M. Goren</td>
<td>Tel Aviv University</td>
<td>Fishes and Museum Class</td>
</tr>
<tr>
<td>Biology and Systematic of Marine Invertebrates:</td>
<td>Y. Benayahu</td>
<td>Interuniversity Institute for Marine</td>
<td>Invertebrates</td>
</tr>
<tr>
<td>(academic course)</td>
<td></td>
<td>Sciences</td>
<td></td>
</tr>
<tr>
<td>Guiding Students</td>
<td>D. Bar-Yosef</td>
<td>University of Haifa</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Guiding Students</td>
<td>G. Bar-Oz</td>
<td>University of Haifa</td>
<td>Mammals and Museum Class</td>
</tr>
<tr>
<td>wild bee taxonomy and ecology</td>
<td>S. Patiny</td>
<td>Faculty of Agriculture, Food and</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environment</td>
<td></td>
</tr>
<tr>
<td>Bird-Watching</td>
<td>T. Shariv</td>
<td>Avshalom Institute</td>
<td>Birds and Museum Class</td>
</tr>
<tr>
<td>Bird-Watching</td>
<td></td>
<td>Israeli Air Force</td>
<td>Birds and Museum Class</td>
</tr>
<tr>
<td>Various seminars</td>
<td>Elat District</td>
<td>Israel Nature and Parks Authority</td>
<td>Mammals, Birds and Museum Class</td>
</tr>
<tr>
<td>Various seminars</td>
<td>Nature Campus</td>
<td>Tel Aviv University</td>
<td>Mammals, Birds, Entomology and Museum</td>
</tr>
<tr>
<td>Guided tours to schoolchildren</td>
<td>Nature Campus</td>
<td>Tel Aviv University</td>
<td>Mammals, Birds, Entomology and Museum</td>
</tr>
</tbody>
</table>
Support for various individuals and organizations

The TAU natural history collections function as a national collection, by providing services to the scientific committee, as well as to other organizations and, to the best of our abilities under currently constrained conditions, also to the general public. Here we list a sample of the services provided by the collections in the past academic year. We apologize that the list is not full, but in the current conditions of under-staffing we are unable to dedicate the human-power to monitor and record all such activities.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Name</th>
<th>Institute</th>
<th>Taxonomic group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxonomic guidance (learning the procedure)</td>
<td>V. Sepliarsky</td>
<td>PPIS of the ministry of Agriculture</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td></td>
<td>Plant Protection and Inspection Services</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td></td>
<td>Israel Nature and Parks Authority</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td></td>
<td>Ministry of Environmental Protection</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>A. Gasith</td>
<td>Tel Aviv University</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>E. Nevo &amp; T. Pavlicek</td>
<td>University of Haifa</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>U. Shanas</td>
<td>Oranim Academic College</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>E. Groner</td>
<td>Ben-Gurion University of the Negev</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>M. Golan</td>
<td>Ben-Gurion University of the Negev</td>
<td>Entomology</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>O. Shelef</td>
<td>Ben-Gurion University of the Negev</td>
<td>Entomology</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>E. van dan Brink</td>
<td>Israel Antiquity Authority</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>U. Galili</td>
<td>Israel Antiquity Authority</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>T. Oron</td>
<td>Israel Nature and Parks Authority</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>S. Moran</td>
<td>Plant Protection and Inspection Services</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>E. Sheffer</td>
<td>IOLR - Haifa</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>Z. Orlin</td>
<td>Israel Nature and Parks Authority</td>
<td>Molluscs</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>North Distric</td>
<td>Israel Nature and Parks Authority</td>
<td>Fishes</td>
</tr>
<tr>
<td>Taxonomy Identification</td>
<td>I. Zohar</td>
<td>Tel Aviv University</td>
<td>Fishes</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td>D. Eilam</td>
<td>Tel Aviv University</td>
<td>Birds, Mammals and Taxidermist</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td>A. Lotem</td>
<td>Tel Aviv University</td>
<td>Birds and Taxidermist</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td>Y. Leshem</td>
<td>Tel Aviv University</td>
<td>Birds and Taxidermist</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td>E. Gefen</td>
<td>Tel Aviv University</td>
<td>Reptilia and Taxidermist</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td>Nature Campus</td>
<td>Tel Aviv University</td>
<td>Mammals, Birds and Taxidermist</td>
</tr>
<tr>
<td>Taxidermist services</td>
<td></td>
<td>Israel Nature and Parks Authority</td>
<td>Birds and Taxidermist</td>
</tr>
<tr>
<td>DNA Shipment</td>
<td>R. Barrientos</td>
<td>Spain</td>
<td>Birds</td>
</tr>
<tr>
<td>DNA Shipment</td>
<td>E. Shani</td>
<td>Society for the Protection of Nature in Israel</td>
<td>Birds</td>
</tr>
<tr>
<td>DNA Shipment</td>
<td>M. Dalebout</td>
<td>University of New South Wales, Australia</td>
<td>Mammals</td>
</tr>
<tr>
<td>Electronic Data</td>
<td>S. Ashkenazi</td>
<td>Hebrew University</td>
<td>All colections</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Electronic Data</td>
<td>Nature Campus</td>
<td>Tel Aviv University</td>
<td>All collections</td>
</tr>
<tr>
<td>Electronic Data</td>
<td>O. Barnea</td>
<td>Israel Nature and Parks Authority</td>
<td>Invertebrates and Fish</td>
</tr>
<tr>
<td>Electronic Data</td>
<td>E. Renan</td>
<td>Ben-Gurion University of the Negev</td>
<td>Entomology</td>
</tr>
<tr>
<td>Electronic Data</td>
<td>L. Gahanma</td>
<td>Plant Protection and Inspection Services</td>
<td>Entomology</td>
</tr>
<tr>
<td>Data</td>
<td>A. Boldo</td>
<td>Israel Nature and Parks Authority</td>
<td>Mammals</td>
</tr>
<tr>
<td>Data</td>
<td>E. Hadad</td>
<td>Israel Nature and Parks Authority</td>
<td>Mammals</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>V. van Soest</td>
<td>Zoological Museum University of Amsterdam</td>
<td>Invertebrates: Sponges</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>C. Massin</td>
<td>Royal Belgian Institute of Natural Sciences</td>
<td>Invertebrates: Echinodermata</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Belgium</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>L. van Ofwegen</td>
<td>National Museum of Natural History, Leiden</td>
<td>Invertebrates: Soft Corals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Netherlands</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>I. Sella</td>
<td>University of Washington, USA</td>
<td>Invertebrates: Soft Corals</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>M.H. Schleyer</td>
<td>Oceanographic Research Institute uShaka Marine</td>
<td>Invertebrates: Soft Corals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Park, South Africa</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>Y. Benayahu</td>
<td>National Museum of Natural History, Leiden</td>
<td>Invertebrates: Soft Corals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Netherlands</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>N. Teruaki</td>
<td>The Nagoya University Museum, Japan</td>
<td>Invertebrates: Tunicates</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>D.W. Wrase</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>D. Michez</td>
<td>Laboratoire de Zoologie, Belgium</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>D. Quicke</td>
<td>Division of Biology, Imperial College London, UK</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>E. Scheuchl</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>G. A. King</td>
<td>Department of Archaeology, University of York, UK</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>G. Evans</td>
<td>Systematic Entomology Laboratory, Beltsville, USA</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>G. Sabatinelli</td>
<td>Universita' la Sapienza, Italy</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>H. Dathe</td>
<td>Entomologisches Institut, Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>H. Winkelmann</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>H.-Y. Han</td>
<td>Department of Life Science, Yonsei University, Korea</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>I. Grichanov</td>
<td>Institute of Plant Protection, Russia</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>I. Winkler</td>
<td>North Carolina State University, USA</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>J. Heraty</td>
<td>College of Natural and Agricultural Sciences, University of California</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>J. Pelletier</td>
<td>France</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>J. Roháček</td>
<td>Department of Entomology, Czech Republic</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>M. Fibiger</td>
<td>Denmark</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>J. Ziegler</td>
<td>Museum fuer Naturkunde, Berlin, Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>K. Szpila</td>
<td>Nicolaus Copernicus University, Poland</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>L. Knutson</td>
<td>Department of Entomology, Smithsonian Institution, Washington</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>L. Munari</td>
<td>Natural History Museum, Italy</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Barták</td>
<td>Czech University of Agriculture, Czech Republic</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. De Meyer</td>
<td>Royal Museum for Central Africa, Belgium</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Fibiger</td>
<td>Denmark</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Gates</td>
<td>Smithsonian Institution, Washington DC</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Langer</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Schwarz</td>
<td>Austria</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Terzo</td>
<td>U.M.H., Laboratoire de Zoologie, Belgique</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>M. Volkovitch</td>
<td>ZIN, Russia</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>O. Pekarsky</td>
<td>Hungary</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>O. Lonsdale</td>
<td>Smithsonian Institution, National Museum of Natural History, Washington, D.C.</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>P. Pedata</td>
<td>Istituto per la Protezione delle Piante, Italy</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>R. Mc Donnell</td>
<td>National University of Ireland</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>S. Risch</td>
<td>Germany</td>
<td>Entomology</td>
</tr>
<tr>
<td></td>
<td>P. Schwendinger</td>
<td>Muséum d'histoire naturelle, Switzerland</td>
<td>Entomology</td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>R. Preiss</td>
<td>United Kingdom Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>S. Sinev</td>
<td>Universitetskaya naberezhnaya 1, Russia Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>R. Szadziewski</td>
<td>University of Gdańsk., Poland Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>S. D. Gaimari</td>
<td>Plant Pest Diagnostics Lab, California Department of Food and Agriculture</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>T. Pape</td>
<td>Zoologisk Museum, Denmark Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>S. Patiny</td>
<td>Entomologie fonctionnelle et évolutive, Belgium Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>S. Schmidt</td>
<td>Zoologische Staatssammlung, Germany Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>T. Dikow</td>
<td>Division of Invertebrate Zoology, American Museum of Natural History, New York</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>T. Saigusa</td>
<td>PhD., Kyushu University, Japan Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>V. Richter</td>
<td>ZIN, Russia Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>T. Griswold</td>
<td>Utah State University, USA Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>V. Michelsen</td>
<td>Zoologisk Museum, University of Copenhagen, Denmark Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>W. Moore</td>
<td>Department of Entomology, California Academy of Sciences, San Francisco Entomology</td>
<td></td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>W. Speidel</td>
<td>Museum Witt, Germany Entomology</td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>Name</td>
<td>Institute</td>
<td>Taxonomic group</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>W. N. Mathis</td>
<td>National Museum of Natural History, Smithsonian Institution, Washington</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>Y. Dorchin</td>
<td>Kefar haHoresh, Israel</td>
<td>Entomology</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>D. Golani</td>
<td>Hebrew University</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>G. Hulata</td>
<td>The Agricultural Research Organization, Volcani Center</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>W.D. Anderson</td>
<td>Grice Marine Biology Laboratory, South Carolina, USA</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>C. Fruciano</td>
<td>Dipartimento di Biologia Animale, University of Catania, Italy</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>A. Hay</td>
<td>The Curator of the fish collection, Australian Museums, Australia</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>J. Freyof</td>
<td>Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany</td>
<td>Fishes</td>
</tr>
<tr>
<td>Shipment of Specimens</td>
<td>M.A. McGrouther</td>
<td>Australian Museum, Australia</td>
<td>Fishes</td>
</tr>
</tbody>
</table>