Faculty of Life Sciences – Department of Zoology, Department of Plant Sciences

Faculty of Medicine – Department of Anatomy and Anthropology

The National Collections of Natural History

Tel Aviv University

Annual Report 2005/2006

Cover design: May Studio

Front cover photograph: Michal samuni, Uri Roll

Back cover photograph: Michal samuni, Uri Roll

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Introduction

We are pleased to present the fourth in our series of Annual Reports of the National Collections of Natural History at Tel Aviv University. It details research, conservation, and public activities of the faculty and staff of the National Collections of Natural History at Tel Aviv University during the 2005/2006 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 history of humankind. Steady collection development is the fruit of the research of our active scientists and graduate students who study species on land, in freshwater, and in the sea.

Because the State of Israel has no museum of natural history, nor are we aware of the existence of any such museum in the entire Middle East, 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. At the same time, the collections are also of immense cultural and educational value.

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); the Archeozoology and Archeobotany Laboratories of the Lester and Sally Entin Faculty of Humanities (the Sonia and Marco Nadler Institute of Archeology) are scheduled to join us when the new collections and research building is constructed.

In the past year we continued to enjoy financial support towards maintaining the collections from the Planning and Grants Committee of the Council of Higher

Education of Israel (VATAT). These funds, crucial for collections maintenance and development, were provided based on the recommendations of the Israel Academy of Sciences and Humanities. The Academy has previously recommended that our collections be declared national collections and that the Planning and Grants Committee provide annual maintenance support as well as part-time academic positions so as to encourage the university to hire the next generation of curators. Moreover, a National Steering Committee was established by the Israel Academy of Sciences and Humanities to oversee the collections' development and the use of public funds.

Three years ago, the former Chair of the Board of Governors of Tel Aviv University, Mr. Michael Steinhardt, very generously pledged 5 million dollars for the development of a proper facility to house the National Collections of Natural History at Tel Aviv University and the research and public activities associated with them. Another foundation has joined in with a generous pledge of 2.5 million dollars. Our founding father, the late Prof. Mendelssohn, has left us a more modest sum in his will and the sum total is an excellent springboard for this ambitious project. We are now working with several government ministries and agencies towards gaining the required government support.

Our collections are dedicated to the conservation of biological diversity through collecting, collection maintenance, research, teaching, and education. We are part of an active research university, the largest in Israel, and our mission focuses on collection development and scientific research. We are pleased to note that in addition to many journal papers and book chapters, our curators have published ten scientific volumes this year that are based upon our scientific collections and/or their taxonomic expertise. We are even happier to note that the overriding majority of these volumes were authored by our new immigrant taxonomists. In the past few years we have the opportunity and privilege to absorb seven new immigrant colleagues from the former Eastern Bloc, and we are gratified with our success in doing so. They have all become productive scientists in their new

homeland, and in particular contribute to the field of taxonomy, which is now of significant global interest. They also support many agricultural, environmental ecological, evolutionary, and conservation studies of scientists in various institutions of higher education as well as government ministries in Israel. This past year we were happy to hire Dr. Silvia Blumenfeld, newly immigrated from Argentina, an expert mycologist (see p. 38), and we are also very pleased that Dr. Sergei Zonstein (formerly of Kyrghyzstan) received a Giladi Fellowship for the coming two years and is well embarked on the track of successful absorption at Tel Aviv University. Dr. Yuri Katz, our Curator of Paleontology (formerly of the Ukraine), retired in the course of the past year but remains as active as ever in research.

Many scientists have used our collections in the past academic year. They have promoted the research of many TAU scientists from the Faculties of Life Sciences, Medicine, and Humanities. Dozens of TAU graduate students enrolled during the past year have used them in their theses or doctoral dissertations, with diverse research topics ranging from understanding the significance of different forestry regimes for biodiversity conservation to gaining insight into the evolution of animal domestication; from studying the use of sea shells in ancient ornaments to identifying alien invasive ant species of Israel; from understanding the functional morphology of early humans to studying the effect of restoration of Wadi Tzeelim; from understanding patterns of terrestrial biodiversity to studying archeological site formation processes; from studying the deep sea fauna of the eastern Mediterranean to assessing the impact of restoration projects in aquatic habitats; from identifying taxa from which biologically active compounds can be extracted for the pharmaceutical industry, to predicting the response of ecological communities to climate change and how to plan for conservation under future climate change scenarios. Moreover, numerous scientists from other institutions in Israel and abroad have used our collections, our taxonomic expertise, and our databases. Thus we continue to contribute to the study of our region's biodiversity.

The Faculty of Life Sciences at Tel Aviv University has a longstanding tradition of service to the Israeli school system. To this day we continue with this tradition, and Tel Aviv University has established "Nature Campus" - our education and public program whose activities 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. More significantly, "Nature Campus" uses the unique knowledge and expertise of the faculty members of Tel Aviv University in the fields of ecology, biogeography, evolution, paleontology, conservation biology, behavior, and physiology to develop public and educational activities.

We also take pride also in our involvement in nature and environmental conservation. The Society for the Protection of Nature in Israel (SPNI), Israel's leading environmental NGO (non-governmental organization), was co-founded by the faculty of Tel Aviv University (Prof. Amotz Zahavi and Prof. Heinrich Mendelssohn), and we are particularly happy that in the past few years the SPNI has chosen to conduct part of its training course for new guides at Tel Aviv University, with Nature Campus. We feel that this training period enhances the strong links and academic support our scientists provide to nature conservation in Israel. The lobbying for conservation laws and the establishment of the Nature Reserves Authority (now INPA, the Israel Nature and Parks Authority) was also a result of the hard work of TAU faculty, in particular the influence of our founding father, the late Prof. Heinrich Mendelssohn. We work hard to follow in their footsteps by continuing the tradition of contributing to society based on our expertise in the study of nature, as well as in many other significant ways. Many members are very active in conservation and monitoring projects and on boards of public and environmental organizations. Our report lists some of these activities.

Here we share with you the progress made in the past academic year 2005/2006.

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

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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

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Sigal Adar, Director of Friends of TAU

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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

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Abraham Hefetz, Head of the 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)

Yoram Yom-Tov	Department of Zoology	Higher Vertebrates
Yehuda Benayahu	Department of Zoology	Invertebrates
Amnon Freidberg	Department of Zoology	Entomology
Yehoshua Kugler (emeritus)	Department of Zoology	Entomology
Menachem Goren	Department of Zoology	Fishes
Lev Fishelson (emeritus)	Department of Zoology	Fishes
Dorothée Huchon	Department of Zoology	Molecular Systematics
Baruch Arensburg (emeritus)	Department of Anatomy & Anthropology	Physical Athropology
Yoel Rak	Department of Anatomy & Anthropology	Physical Athropology
Israel Hershkovitz	Department of Anatomy & Anthropology	Physical Athropology
Nissan Binyamini (emeritus)	Department of Plant Sciences	Fungi
Margalith Galun (emeritus)	Department of Plant Sciences	Lichens
Jacob Garty	Department of Plant Sciences	Lichens
Ya'akov Lipkin (emeritus)	Department of Plant Sciences	Algae

Curators (TAU faculty members; new immigrants in various absorption schemes)

Silvia Blumenfeld	Department of Plant Sciences	Fungi
Vladimir Chikatunov	Department of Zoology	Coleoptera
Vassily Kravchenko	Department of Zoology	Lepidoptera
Sergei Zonstein	Department of Zoology	Arachnidae
Andy Lerer (emeritus)	Department of Zoology	Diptera
Yuri Katz (emeritus)	Department of Zoology	Paleontology
Olga Orlov-Labkovsky	Department of Zoology	Micropaleontology

Associate curators (faculty members)

Yossi Loya	Department of Zoology	Stony Corals
Micha Ilan	Department of Zoology	Sponges
Dan Gerling	Department of Zoology	Hymenoptera
Abraham Hefetz	Department of Zoology	Entomology
Bella Galil	Israel Oceanographic & Limnological Research - Haifa	Crustaceans
Danny Simon	Department of Zoology	Formicidae
Ilan Yarom	Hazeva Research & Development	Diptera
Eli Geffen	Department of Zoology	Molecular Systematics
Ofer Mokady	Department of Zoology	Molecular Systematics
Elazar Kochva (emeritus)	Department of Zoology	Herpetology

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

Ann Belinsky	Department of Zoology
Revital Ben-David-Zaslow, PhD	Department of Zoology
Vered Eshed, PhD	Department of Anatomy & Anthropology
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
Nili Shinnar	Department of Zoology
Alex Shlagman	Department of Zoology
Tirza Stern	Department of Zoology
Chemda Zigman	Department of Zoology

'Nature Campus'

Yael Gavrieli, PhD	Director
Anat Feldman	Content Development
Neta Servi	Public Programs Coordinator

Public programs - Nature Campus

On its sixth year of operation, 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:

A new scientific committee was established, with scientists representing all Life Sciences departments as well as the Jaime and Joan Constantiner School of Education and the Sonia and Marco Nadler Institute of Archaeology. The scientific committee provides fresh perspectives on environmental issues along with better cooperation with Nature Campus partners at TAU.

Nature Campus has matured and entered into a phase of ongoing activity. As part of its routine, it has continued to develop new programs, partnerships, and projects. Worthy of special mention is the further expansion of research workshops, Urban Nature programs, Nature on the Web, Zoo On-Line, and the Invasive Species Website.

During the summer of 2006, when many families from the North of Israel arrived in the center of the country, Nature Campus joined the initiative of Tel Aviv University and hosted groups and individuals at the Zoological and Botanical Gardens.

The TAU Price-Brodie initiative in Jaffa has been our partner from day one and our first educational activity. During the past six years we developed together many programs, which have since evolved to become our 'flagship' projects: the research workshops at Ironi Yod-Beit Arab High School and Urban Nature at

all Arab and Jewish public elementary schools. In the past year, Price- Brodie policy has changed from full sponsorship to partial support. The remaining cost was covered by the schools, which had to choose between different projects. We are proud that all but one, (9 schools in all), chose to continue Nature Campus programs.

As of the summer of 2006, upon the request of the Botanical Gardens and the Department of Plant Sciences, Nature Campus received full responsibility for all public programs at the Botanical Gardens. This reorganization has enlarged Nature Campus's range of activities, without increased staff or budget. In the following months, Nature Campus team has put a special effort into developing, upgrading, and adapting programs for activities at the Botanical Gardens. We find that the present operation better suits our mission statement.

Ongoing programs based on the natural history collections:

Public programs:

- **Guided Tours**. This program offers a two-hour activity at the I. Meier Segals Garden for Zoological Research or the Botanic Gardens. During 2005/2006, a new tour theme was developed – Urban Nature – and was well received by the audience.

  During the summer war, Nature Campus contributed to the national effort and opened the zoo gates to the general public; this operation required special adaptation of our visitor services. However, once the war was over, we returned to our routine policy of group visitations only. With the support of the Ministry of Science and the City of Lod, 500 children from this city took part in a three-hour tour. The Ministry covered the expenses of the tour while the municipality paid for the transportation. Thus, underprivileged youth, from Arab and Jewish schools, at times in mixed groups, were able to enjoy this activity. Their

visits were a special experience for them as well as for our staff - their interest, enthusiasm, and excitement inspired us all.

- **Science Days**. The program offers a three to four-hour activity for classes at the Natural History Collections as well as at the Gardens. Most of these activities are based on the collection's artifacts. The covered themes are diverse and include, among others, Marine Biology, Nature Conservation, Biodiversity, Reproduction in Nature, Plants and their Environment, Predators and Prey, Evolution of Humans, Adaptation and Ecology of Temporary Winter Pools.

  As part of our special effort to develop programs on urban nature, we developed a science day on this issue as well. This new program has received a very positive feedback.

- **Research Workshops**. A series of 3-6 science days centered on one theme, targeted for environmental or biology high-school students, is integrated into their school studies. The first workshop developed was the 'winter pool' workshop, which was a pilot in 2003/2004 and then in 2004/2005 as an upgraded program. Following its success, two additional workshops were developed: Ecosystems and Urban Nature. The workshops were concluded with a celebrative event in the presence of the students' parents. The students then presented their work in posters and gave short lectures. We find that this mode is especially beneficial in teaching the theme of the program as well as scientific way of thinking.

- **Urban Nature enrichment program**. This program, in its third year now, with the cooperation of the TAU Price-Brodie initiative in Jaffa elementary schools, continues to receive very positive feedbacks. The program comprises of 9-10 activity sessions at the school and its yard and 3-4 additional activities at the Zoo and the Botanic Gardens. The program focuses on the living world in the immediate environment of

the children. For the children of Jaffa, a typical inner-city sector, the program reveals a new dimension in their otherwise very urban surroundings and nurtures new attitudes towards nature.

- **Science Camps.** Science camps were held during the Hanukah, Passover, and summer school vacations. The camp, a 4-5 days program, offers scientific exploration of the biosphere for elementary school children. Each day is focused on a major phenomenon or process in the living world; for example the food web, behavioral communication, and adaptation.
- **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's highlight was the course of the Society for the Protection of Nature in Israel: a 50-hour program in which over 100 new guides participated and leading TAU researchers gave lectures. This year's course was especially rewarding, as alumni from previous courses returned to hear lectures and/or expand their knowledge in new topics that they had missed in the past. The feedback was outstanding and we look forward to the next courses.

On-Line resources

Because the Collection's capacity for public visitation is very limited, we have made a special effort to develop the Nature Campus website – www.campusteva.tau.ac.il. This site reaches out to the public, and offers, in a language understandable to all, the wealth of scientific knowledge based on the Natural History Collections (Learning resources section).

- **Zoo On-Line** is a joint project with the I.Meier Segals Garden for Zoological Research. 6-8 cameras continuously broadcast the sights from the Zoo. The pictures are accompanied with information, updated by the Nature Campus webmaster, on the Zoo's inhabitants. The project is supported by the Israel Electric Company and Moked Emun security company.
- **Nature on the Web**. During 2005/2006, we began developing a new website and its first stage of development will be completed by February 2007. It will offer information in Hebrew about Earth systems, ecosystem services and highlights from status reports worldwide. In addition to being an open website, it will also serve as a foundation for youth competitions on sustainable development (developed with TAU's Science Oriented Youth Unit and the Ministries of Education and of Environmental Protection).

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-products of numerous field studies conducted 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, expert, and dedicated technical staff members, who do their best, in nearly impossible physical conditions and major 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 for her compiling it. Here they also give a glimpse of 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

The staff members of TAU Natural History Collections continue their activities to promote and preserve the various collections. As in previous years, we have put much effort into 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, and assist graduate students, academic courses, and "Nature Campus" activities.

Over the last three years, the wet museum has suffered from an outbreak of mold. Most of the jars, shelves, covers and walls became covered with mold. This year we finally succeeded in solving the problem and have invested an enormous amount of work in repairing the damage. We must individually clean every jar and shelf of the collections and replace all plastic covers. This work is arduous and tiring but necessary, and our first priority in order to end the problem once and for all and to save the collections from irreparable damage.

During the academic year 2005/2006 we received and incorporated many specimens of various taxonomic groups collected worldwide by the collection curators and staff, students, rangers from the Israel Nature and Parks Authority, and others. As we reported previously, the reptile collection is now active and almost 200 new records were added this past year. Most of these were collected by graduate students during their field work. A new species of snake, *Micrelaps tchernovi*, was determined by Prof. Yehudah L. Werner, from The Hebrew University, Jerusalem, based also on the collection material.

Much work was done this year in to organize the dry vertebrate collection in the new specimen cabinets purchased with the support of VATAT funds. Some 150 new specimens have been preserved and added to the mammal collection and about 30 to the bird collection. These include specimens collected by rangers from the Israel Nature and Parks Authority.

The amphibian collection is now entirely digitized and, with the help of Dr. Sarig Gafny, we have even succeeded in taxonomically identifying the larvae. About 400 new specimens have been added to the amphibian collection.

During this year we also focused on another, previously inactive collection. The echinoderma collection is now in the process of being digitized, cleaned, replenished or having the preservation liquids changed and samples are being transferred to better storage containers and relabeled. This collection contains thousands of specimens collected mostly from the Mediterranean and the Red Sea since 1945. So far, almost 1500 specimens have been processed and we are hoping that by next year we will complete our update of the entire collection.

As in previous years, the collections made by Prof. Yehuda Benayahu have been sorted, preserved, and digitized for future research and identification. The material includes soft corals, sea anemones, sponges, tunicates, nudibranchs, and other invertebrates. As a routine procedure, tissue samples for molecular analysis were taken from most of the soft coral specimens and preserved.

We continue the fruitful cooperation with Tel Aviv University students collecting samples in the field. Collections made by students are immediately digitized in order to facilitate easy transfer of specimens to the museum in the near future. Cooperation between students and staff of the collections is excellent. We give the students support in all fields including preservation, identification, labeling, and cataloguing. Tirza Stern has developed a unique database for this purpose and continues to work with the students, adjusting it to their special needs. The students of Prof. Avital Gasith are in the process of merging their collections, consisting of freshwater invertebrates caught in various rivers in Israel, with the National Collections. Together with the samples, the collection managers are provided with the digitized database to assist their incorporation into the National Collections and to help avoid mistakes. Students of Prof. Tamar Dayan have transferred a very large

collection to the museum, containing thousands of specimens, of mammals, amphibians, reptiles, and arthropods caught in pitfall traps. The vertebrates among them have been preserved, identified, digitized, and labeled; the invertebrates have been preserved and sorted for future identification.

The archaeozoology collection was in a dreadful condition. It was held in two leaking containers and suffered from damp, rats and other pests. This collection contains many bones from some of the most important archeological digs in Israel. The collection has been transferred to two new containers and all boxes have been replaced.

Yuri Katz, curator of the paleontology collection, reports on a unique project conducted on the bottom sediment in the Gulf of Aqaba (st.RS-104, 220 m depth). More than 50,000 microfossil specimens have been obtained. From this new collection about 300 species of invertebrate fossils (Sarcodina, Porifera, Coelenterata, Vermes, Brachiopoda, Bryozoa, Echinodermata and Arthropoda) were determined, 224 of them attributed to Pacific foraminifers.

Routine work on the insect collection includes absorption and integration of donated collections; labeling and sorting of specimens from collecting trips; identification of and research on select groups (including over 40 shipments scientific specimens to specialists, mostly overseas, during 2006); and preservation activities, such as renewal of naphthalene. Special treatment was required in cases of damage caused by mold and pests. As in past years, we have continued digitizing this collection. This year we focused on the Parasitica and Lygaeidae (2000 specimens). Newly caught insects are immediately given a catalog number and digitized. During the present year, about 11,000 new insects were added to the collection. From his collecting trip, Prof. Dan Gerling collected groups of African and Brazilian whiteflies, which are now being identified. Those already known are *Aleurotrachelus attratus* and *Paraleyrodes bondari.* Andy Lerher described the Bengaliidae family as a new family for

science. Vladimir Chikatunov performed an enormous identification work on a beetle collection from pitfall traps and malaise traps in various projects and areas (South Arava and South Jordan, Mt. Carmel, Nizzanim, Adullam, Avedat and Lehavim, Coastal Plain, Nahal Shaharut, Jordan Valley and others). There is a close working relationship between the "Plant Protection and Inspection Servicies" (PPIS, Ministry of Agriculture) and the insect and arthropoda staff. As in previous years, the collection staff made identifications work and guided the PPIS members.

Sergei Zonstein, curator of the arthropoda collection, reports on his work. As in the previous year, field work included about 50 days in the field in various regions of Israel, primarily in the desert (Hazeva and other parts of the Arava and the Rift Valley, as well as the central coastal plain sands near Or-Akiva), collecting spiders (Arachnidae) and spider-wasps (Pompilidae). Laboratory work mainly comprised identification of collections made by students, as part of their projects, and establishing a database for these collections.

Progress Report for the Mollusc Collection 2005-2006

Henk K. Mienis

During the past academic year we continued revising of the dry mollusc material in the various extra-university collections in order to unite them in one large, systematically arranged general collection. The identifications were again carried out by Henk Mienis, while Revital Ben-David Zaslow took care of entering all the relevant data from these samples in the computer. During Revital's maternity leave, we received great help from Larissa Lerner. Chemda Zigman divided her part of the work equally between the wet and dry collection. At the moment 34,000 samples in the mollusk collection have been completely digitized.

New acquisitions

New material continued to arrive in the collection. Of special importance was the arrival of the private shell collection of the late Kalman Illes Hertz (see elsewhere in this report).

During the academic year 2005/2006 new material has been received from the following persons:

Name	Brief description of the material
U. Bar-Zeev	Terrestrial mollusks from Israel
O. Caro	Various marine and freshwater mollusks world wide
B. Galil	Marine mollusks dredged in the Eastern Mediterranean
A. Glazer	Marine mollusks from cooling channels of Power Stations near Haifa and Ashqelon
E.L. Heiman	Cypraeidae type material
J. Inchaustegui	Marine mollusks from the fish market in Houston, Texas, U.S.A.
D. Mienis	Terrestrial snails from Nahal Oren and Horvat Shallala
H.K. Mienis	Terrestrial and freshwater snails from Israel and the Netherlands; Miscellaneous world wide material ex-collection Mienis
Sh. Moran	Terrestrial and freshwater snails intercepted by inspectors of the Plant Protection and Inspection Services, Ministry of Agriculture
R. Ortal	Marine mollusks from Aquaculture, Elat
Y. Sharon	Marine mollusks from the Power Station Hadera
E. Sheffer	Marine mollusks from the Mediterranean coast of Israel
Y. Sinai	Terrestrial snails from Israel
B.S. Singer	Terrestrial snails from former Yugoslavia
Y. Weiss	Kalman Illes Hertz Collection (see elsewhere in this report)

Type material

Several samples consisting of type-material of taxa described by J.J. van Aartsen & J. Goud (Bivalvia: Diplodonta) and E.L. Heiman (Gastropoda: Cypraeidae) were received for permanent storage in the collection.

Material sent on loan

All the material belonging to the marine gastropod family Triviidae has been sent on loan to D. Fehse (Germany) and J. Grego (Slovakia), specialists who are revising this family globally.

The Cypraeidae in the collection are regularly studied by Dr. E.L. Heiman (Rehovot), and data are used in his many publications.

Mollusc conservation

The Pagoda snail *Xerocrassa davidiana picardi* (F. Haas, 1933) is an endemic subspecies confined in its distribution to several kurkar outcrops (a local sandstone formation) in the Ramat Gan and Givatayim. Owing to ever-increasing urbanization of the area, only one population still exists on the so-called "Givat HaAntennot" in Givatayim.

In the winter of 2005 surveyors started working on the hill, and after questioning, we learned there are plans to turn the hill into a building plot.

In order to save this tiny snail, named after the well-known Israeli geologist Prof. L. Picard, from extinction, some 250 living snails were collected and released on a kurkar outcrop in the Botanical Garden of the Tel Aviv University.

During rainy days in the winter of 2006/2007 we will evaluate the current state of that artificial colony. If necessary we will transfer additional snails to the botanical garden.

Participants in this project are: Dr. M. Sternberg on behalf of the Botanical Garden of the Tel Aviv University, Dr. R. Ortal, Dr. Y. Malihi and Mr. O.

Harari, all on behalf of the Israel Nature Reserves and National Parks Authority, Mr. U. Bar Zeev (associated with the Israel Malacological Society) and Mr. H.K. Mienis (as initiator of this project on behalf of the National Collections of Natural History, Tel Aviv University).

Progress Report for the Fungi Collection 2006

Project: Biodiversity and conservation of Higher Basidiomycetes in Israel

Silvia Blumenfeld

Study of biodiversity of higher Basidiomycetes of Israel

In Israel, the situation of taxonomic and ecological studies of higher fungi is rather critical. Since publications of Binyamini (1975, 1984, 1987, 1993), there are no records of such of studies. Based on the Fungal Herbarium of Tel Aviv University, which has a collection of 3762 specimens developed by Prof. Nissan Binyamini during the last 40 years, I have critically revised the two main Orders of Higher Fungi: Agaricales and Aphyllophorales. All specimens were revised, and we made corrections as appropriate, for example changing some classification features. We started to screen toxic mushrooms and their mycotoxin groups. From the TAU database of mushrooms, we found 31 species of potentially toxic mushrooms; 19 of them are toxic, 9 are suspected to be toxic, and 3 are lethal. From the database we also summarized collection dates for all records.

Fungal culture collection

The use and study of mushrooms involves living cultures and the development of regional gene banks. Mushroom collections that maintain strains in pure culture, stable and viable conditions, can contribute valuable knowledge in areas such taxonomy, management and sustainable use. Proper conservation and management of germplasm require knowledge not only of the mushrooms themselves, but also of their growth and preservation techniques, properties and

potential applications, as well as the provision of an exchange service with other academic units worldwide. In the last few years there is heightened awareness of the value of mushroom culture collections both in the conservation of genetic resources and biodiversity, and in providing biological certified material for research projects and industries (Labarere, 2000). The TAUFCC will provide our researchers with a reliable place to deposit voucher specimens, because in general Israeli scientists usually deposit even type native species in international collections outside Israel (Steiman et al., 2000). I have continued to add new strains of filamentous fungi of Israel and other countries, a collection I started in 2003 in Israel. At present we have records of 51 species and 30 genera.

We affiliated the collection to the World Federation of Culture Collections (WFCC) and to the World Directory of Collections of Culture of Microorganisms (WDCM), as there is no Israeli collection of higher fungi in such an international institution, which holds the world database of microorganisms. All fungal collections associated with fungal herbaria at universities are members of the WFCC. Up to now, in Israel there were only 2 affiliated collections: WDCM 295, a collection of bacteria from the Central Laboratory of the Ministry of Health in Jerusalem, and WDCM 144, Center Rhizobium Collection of the Volcani Institute. The acronym of our collection is TAUFCC (Tel Aviv University Fungal Culture Collection) and its registration number is 899 (WDCM, 2006. www.wdcm.org/CCINFO/CCINFO.xml?899).

Chemotaxonomy of wood- rotting fungi

The chemotaxonomy of wood-rotting fungi is an interesting field in described our patent (Blumenfeld and CONICET, 1998). We screened the enzymes of the wood-rotting fungi. Cultures are deposited as voucher specimens at the Fungal Culture Collection of Tel Aviv University (TAUFCC, World Data Centre for Microorganisms, 2006). According to the TAU fungal database (3762

specimens), there are records of 112 species belonging to 47 genera of wood-rotting fungi. Characterization of enzymes that break down lignin is an enormously important chemotaxonomical application.

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Collecting trips and expeditions

A dynamic archive, our natural history collections grow annually through donations, research projects, and collecting trips and expeditions. Many research projects add numerous specimens to our collections; other collections benefit from focused collecting trips. Here we report some of the new collecting activities of our scientists.

Collecting trips of the Entomology

Amnon Freidberg

Cyprus

In spring 2006 my wife and I spent five days in the Greek part of Cyprus mostly collecting insects. The official excuse for this trip was to collect specimens of a new species of Dorycera (Diptera: Ulidiidae), a genus of picture-winged flies that was recently revised by Hanan Ackerman, a M.Sc. student of mine. We had specimens from the island, mostly collected in April, that we had borrowed from European collections and we wanted to collect additional specimens before we describe this species as new. So we spent about three days at the central southern part of the island, especially up north to the peak of Mt. Olympus (nearly 2000m) of the Troodos Mountains, and some distance north of the peak, and about a day at the northwestern corner of the island at or near sea level. The landscape and vegetation reminded us of Israel, and many species are the same. However, Cyprus is noted for its high rate of endemism, and we did collect several species that apparently are endemic. Of our focal species we collected only one female, and we assume that we came a little too late in the season. Owing to previous contacts of Leonid Friedman, we have established good relationships with two amateur naturalists, Mr. Christodolus Makris and Dr. Yannis Christofides, who were very helpful during the visit and were also mobilized to help collect picture-winged and related flies for us. Altogether, we brought back about 1500 pinned specimens.

Orient

In conjunction with the 6th Congress of Dipterology, in Fukuoka, Japan, my wife and I also made collecting trips to the Philippines and southern India. While I was interested in collecting all flies (Diptera), my specific objectives were focused on fruit flies in three groups on which I have ongoing research: bamboo flies (tribe Gastrozonini), Acanthaceae-feeding flies (tribe Tephrellini), and Asteraceae-feeding flies of the tribe Schistopterini. I did get representatives of all three groups, although not always in large numbers. Gastrozonini and other bamboo flies are best collected by baits. The baits consist of cut bamboo shoots, preferably the growing tips. One cuts a large shoot and slices it into smaller pieces both transversely and longitudinally, leaving it in different positions at a more or less exposed place for some time. Flies are attracted usually within an hour or so, although sometimes within minutes, and keep flying in the whole day. These flies are collected, sometimes with difficulties, using a sweepnet. In the Philippines, only three species were collected, including a giant species of *Enicoptera*, a genus especially characteristic of that country. I collected a good series, but also observed them during mating and oviposition. In India, I collected about ten species, some on a small, shrubby bamboo, but mostly on a giant bamboo (*Dendrocalamys stricta*), which attains 15-20 m in height. In India, I also collected a species of *Sundaresta* that breeds in the pods of Strobilanthus (Acanthaceae), a showy shrub (known as Kurinji) that blooms once every 12 years. I also collected and reared from its host plant a species of *Rhabdochaeta* (apparently *R. pulchella*; Schistopterini) that was known from Java and East Africa, and the present finding is an important link within the disjunct distribution of this species. Beside these interesting collections, it was also extremely interesting to stay at a Raja (king) home in Kukkal and to observe the mixed culture, especially the combination of the Maharaja's happy and partly lost days of hunting and the growing interest in protecting the environment. Altogether we brought back about 2,500 specimens.

Benthic biodiversity surveys off the Mediterranean coast of Israel

Bella S. Galil

In 2006 eight campaigns were been conducted off the Mediterranean coast of Israel to sample the benthic biota. Bella Galil, Mel Cooper, Limor Shoval, Sima Usvyatzov, and Guy Paz participated in the cruises aboard the R/V Shikmona and Etziona of the National Oceanographic Institute, IOLR. The surveys were conducted as part of baseline studies or monitoring surveys (off **Palmahim**, 14.09.2006, 37m depth, box core and trawl samples; 26.05.2006, 37 m depth, box core and trawl samples; 13.09.2006, 60-64 m depth, box core and trawl samples; 25.05.2006, 60 m depth, box core and trawl samples; off **Ashdod,** 17.09.006, 12 m depth, box core samples; 24.05.006, 12 m depth, box core samples; 17.09-19.09.2006, 5 m depth, box core samples; off **Eratosthenes seamount**, 20-22.06.2006, 1023-1424 m depth, box core and trawl samples). The macrofaunal samples – several hundred specimens – include rare records and species previously unknown before from the Israeli coast.
All the material is currently kept in the Zoological Museum, Department of Zoology, Tel Aviv University, Israel.

Biodiversity surveys of the Penghu Island, Taiwan

Yehuda Benayahu

Comprehensive collections of soft corals were conducted by Prof. Yehuda Benayahu in Penghu Island, Taiwan. Over 125 samples were collected in various reef sites there. This was the first soft coral survey in these remote reefs. In conjunction with the fieldwork a taxonomic octocoral workshop was organized by Prof. Benayahu with a dozen of participants from Taiwan and Hong Kong.

New museum faculty and staff

This year, the national collections welcomed one new staff member.

Dr. Silvia Blumenfeld

Amram Eshel

We are proud that Dr. Silvia Blumenfeld joined the team of curators of the botanical collections. In 2002 Dr. Blumenfeld immigrated to Israel from Argentina where she had a long and successful career as a professor of Mycology and Biotechnology of Filamentous Fungi. Dr. Blumenfeld received her academic education at the University of Buenos Aires. From 1980 she served as a member of the *Carrera del Investigador Cientifico y Tecnologico* of the National Research Council of Argentina (CONICET) until her departure for Israel. Dr. Blumenfeld was also a member of the faculty at *Universidad Nacional del Comahue, Faculty of Agronomy, Cinco Saltos, Rio Negro, Argentina* where she held the rank of Assistant Professor in Phytopathology since 1986 and was promoted to Full Professor in Biotechnology of Filamentous Mushrooms in 1995. On April 1995 Dr. Blumenfeld received the Argentine National José Antonio Balseiro Prize, one of the most prestigious scientific awards in Argentina, awarded by the Argentinean President and the Forum for Science and Technology.

During her career Dr. Blumenfeld published more than 30 articles in scientific journals on fungal ecology, phyotopathology and fungal taxonomy. She also published four books on fungi production and phytopathology. In her capacity as faculty member Dr. Blumenfeld taught many courses in mycology and fungal biotechnology.

Dr. Blumenfeld served as a consultant of the microbiological industrial laboratory *IMEXTRADE S.A., Cinco Slatos, Rio Negro, Argentina*. In this capacity she developed a process for production of edible mushrooms on

industrial waste that was patented in February 1998 (Argentinean Institute of the Industrial Property, INPI, record # 329860/91, shared with CONICET, Pat. No. 251.648).

After her arrival in Israel Dr. Blumenfeld worked for two years at the Golan Research Institute at Kazerin, Ramat Hagolan, as a phytopathologist in charge of identification of molds, yeasts and mushrooms and isolation of local strains, and identification of fruit and post-harvest diseases in vineyards.

At Tel-Aviv University, Dr. Blumenfeld assumed the role of curator of the mycological collection. This collection was founded by Prof. Nissan Benyamini, who is now retired. Building on their former scientific acquaintance, Dr. Blumenfeld established warm relationships with Prof. Benyamini. We are confident that this will ensure a smooth transition. In her capacity as the curator of the mycological collection Dr. Blumenfeld has been revising the classification of the items in this collection according to new developments in fungal taxonomy and preparing a new classification of the toxic mushrooms of this country.

New collections

The Malacological Collection of Kalman Hertz (1921-2006)

Henk K. Mienis

On 25th July 2006 the Mollusc Collection received an important addition to its holdings: the collection of the late Kalman Hertz. This small but well-documented shell collection was donated to Tel Aviv University on behalf of the family by his long standing partner Mrs. Yehudit Weiss.

Short Biography of Mr. Kalman Hertz

Kalman Illes Hertz was born on 19th October 1921 in Arad, Transylvania. He received his formal education in Romania, where he began to study the mechanics of electricity.

During World War II he was imprisoned and sent to a Work Camp, but he managed to escape and joined a group of other young Jews. Together they made their way to Austria but were arrested as illegal residents. After another escape he managed to cross the border to Switzerland, where he met members of the Jewish Brigade. They helped him to cross into Italy and arranged a place for him on a boat taking illegal immigrants to Palestine. He arrived in 1946 and almost immediately joined the nascent Israel Defense Forces. During the War of Independence he suffered a wound to one of his eyes.

After his recovery he completed his studies in Electrical Engineering in Israel and worked in that profession until his untimely death on 8 March 2006. Professionally he was involved in several large projects in Israel, notably the building of the Habima Theater and the "Hechal Hatarbut" (the Cultural Center). Later he started his own company and specialized in making control boards for electronic systems. In 1994, at the age of 73, he suffered a work accident: he fell in an elevator shaft and smashed both his knees. He decided to give up physical work and subsequently earned his living as a consultant.

His interests in shells developed while he worked on electrical installations in Sharm el Sheik, Sinai. He enjoyed scuba diving, and this gave him the impetus to start his first collection. This one was lost when his marriage broke up. After some time he again began assembling a collection. Every time he visited a beach he did not leave it without a bucket or two of shell grit. Micro shells became his specializaty. After he published several short notes in a journal for shell collectors in Germany, he became an enthusiastic member of the Israel Malacological Society. He was also a regular visitor to the Mollusc Collection of Tel Aviv University.

While his local shell collection was donated to the university, his show collection of large foreign shells, assembled during his various visits to the Far East, will be taken care of by his family in Givatayim as a memento to him and his passion.

His Malacological Collection

The collection donated to the Tel Aviv University comprises about 1500 samples. Each lot consists of a single species, represented in most cases by many specimens, and is supplied with full information concerning the locality and date of collection. About 90% of the samples originate from places along the Mediterranean coast of Israel: Palmahim, Yafo-south, Tel Barukh, Herzliyya, Mikhmoret and Shiqmona. The remaining 10% of the samples had been acquired during his various journeys to Slovenia, Croatia, India & Sri Lanka, Philippines and other areas in the Far East. Noteworthy is the almost complete absence of samples from the Red Sea.

Marine shells form the major part of his collection; land- and freshwater mollusks are represented by less than 100 samples. The marine material collected on the Mediterranean beaches is rich in Lessepsian migrants and other invasive species from the Indo-Pacific. Many micro-shells belonging to such genera as *Cerithiopsis*, *Zafra* and *Chrysallida* are included. They form an

important addition to the mollusk collection. The mollusk collection also received a small collection of shell books, of which 15 turned out to be important additions to the malacological library.

At this moment the entire collection is being revised, catalogued and prepared for permanent storage. Within another few months all the data from his collection will be available in electronic form.

Acknowledgements

We thank Mrs. Yehudit Weiss for donating this important collection to the university and Mr. Uri Bar Zeev for his role as a middleman and for the transfer of the material to Tel Aviv University.

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The Entomological Collection of Prof. Jacob Wahrman (1924–2005)

Ariel Leib Leonid Friedman

Prof. Jacob Wahrman was born in Frankfurt am Main, Germany, into a family that had emigrated from Galicia, in the Austro-Hungarian Empire. At the age of 10 he arrived in Palestine. His family lived in Jerusalem and he attended the Gymnasia Rehaviya high school. He went on to study at the Hebrew University of Jerusalem, where he received his Ph.D. in 1955; his dissertation was on the genetics of the Mantidae. He remained at the Hebrew University, first as a lecturer (from 1956), then as an associate professor (from 1966) and finally as a full professor (1972-1993). Concomitantly he held external academic positions as an associate researcher at the University of California, Berkeley, USA, as a visiting professor at Karolinska Inst., Stockholm, Sweden, and as a visiting professor at Yale University, USA. He retired officially in 1993, but continued his diverse researches up until his untimely death in 2005.

Prof. Wahrman's main interest lay in the field of genetics. He was a pioneer in the study of chromosomes of a wide range of organisms, devoting a large part of his genetic research to this subject: chromosome evolution; occurrence and mechanism of Robertsonian changes; the extent, kinds and function of heterochromatic segments; mechanism of meiosis; fine structure of chromosomes; gene expression during spermatogenesis; and chromosome-derived male sterility. His studies were conducted on a wide range of living organisms: insects, fish and mammals. He studied the sex mechanism of the darkling beetle genus *Blaps* and of different Mantidae, as well as performing research on the chromosomes and evolution of rodents (*Spalax*, *Gerbillus*), gazelles (*Gazella gazella* and *G. dorcas*), and the fish genus *Tilapia*. The first studies of human cytogenetics in Israel were performed in his laboratory, where he also trained most of the first generation of Israeli human cytogeneticists.

Prof. Wahrman was fond of nature and interested in the history of the Holy Land. He amassed a collection of books and photographs on the latter subject that is probably unparalleled even in major research libraries. He published several articles on various topics on the history of the Holy Land and indeed completed his final paper (together with his son) only days before he passed away.

Prof. Wahrman's diverse interests in nature, especially in the nature of the Land of Israel, turned him into one of the most important collectors of representatives of Israeli fauna, especially insects. His collecting activities spread over 50 years, in Israel (mostly in the Judean Hills and the southern part of the country), and in Turkey and Cyprus. Nine species of insects (an apterygote, a termite, two crickets, a hunting bug, two bees, a wasp, and a fly), one species of pseudoscorpion, one species of isopod and one species of Triassic ammonite have been described under the name "wahrmani" in his honor; most of these he had collected himself.

The first part of his collection (mostly beetles, flies, termites, bugs, and hymenopterans) was transferred to TAU about 12 years ago. After his death the second half (10 collection cabinets), including Orthoptera (Acrididae, Gryllidae), Blattoidea (Blattidae and Mantidae), Coleoptera (Tenebrionidae), Hemiptera, Neuroptera and Dermaptera, was delivered to TAU. The collection includes many rare species and much type material.

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.

Hanan (Hans) Bytinski-Salz (1903-1986)

A. Freidberg & H.K. Mienis

Prof. Hanan Bytinski-Salz was born on June 24th, 1903 in Karlsruhe, Germany, and was educated at the universities of Berlin and Freiburg, where he received his Ph.D. degree in 1929. He continued his post-doctoral training in various branches of zoology at the German-Italian Institute for Marine Biology at Rovigno, Istria, Italy, at Yale University in the U.S.A., and at the John Innes Horticultural Institution in London, England.

In 1931 he married Paula née Lipschütz. They settled in Israel in 1939, and for several years he sought a suitable permanent job. Eventually, in 1948, he obtained a position with the Ministry of Agriculture, subsequently heading its Plant Quarantine Service. During that period he became involved in the applied aspects of entomology, while combining his research in this field with his interests in the general faunistics and taxonomy of the relevant pest groups. His last position was as Professor of Zoology at Tel-Aviv University, a post he held

from 1954 until his retirement in 1974 as the first Professor Emeritus of the Department of Zoology.

Prof. Bytinski-Salz passed away on October 25, 1986, at the age of 83, leaving a daughter, Ruth, and three grandchildren. His death brought to an end the long career of an unusual man and scientist, whose varied interests and occupations are rarely found together nowadays in one person. As a professor of zoology, he taught and published in such varied fields as entomology, histology, embryology, sexuality, palaeontology, and evolution. Beyond the groves of academia he had great interest in and knowledge of history, archaeology and art, and he took much pleasure in traveling and hiking throughout Israel, which he loved and knew so well. A compulsive collector, he established and maintained at various times private collections of insects, fossils, books (entomological, palaeontological and rarities), archaeological artifacts (he had a sixth sense for the authenticity of the finds), works of art, stamps, and autographs. Despite his appetite for collecting, Bytinski (as his friends and colleagues called him) was not a possessive person, and was generous enough to give away items from his cherished collections to others. When he moved to Jerusalem in 1983, he donated his three main collections (insects, fossils, and scientific library) to Tel-Aviv University. In 1985 he also made a generous donation to the Entomological Society of Israel that ensured the future of the society's journal. This last gift should be viewed in the context of his activities as a founder and editor of that journal.

Bytinski published 88 papers, mostly in the field of entomology but also on histology and embryology of vertebrates. His research in entomology included papers dealing with cytogenetics and evolution, bionomics and control of pests, taxonomy, zoogeography and faunistics. He studied and described 168 new species and forms from such diverse groups as Lepidoptera, Hymenoptera, Coleoptera and Homoptera. His scientific work comprised several stages. His earlier papers were predominantly experimental and included embryological

work with amphibians and hybridization tests with Lepidoptera. The latter led him to taxonomic work on Lepidoptera.

Bytinski-Salz found in 1933 that if the sphingid *Celerio galli* males and *Celerio euphorbiae* females were cross-mated, the preimaginal stages of the resultant females failed to develop into imagines. However, if the ovaries of these hybrid females were transplanted into hybrid males (which develop normally), full-grown eggs are matured within the latter. Bytinski suggested that this effect was due to a hormonal influence from the new host. This discovery turned out to be an important forerunner of the classical studies by V.B. Wigglesworth (1936), who demonstrated the function of the corpora allata in inducing the development of eggs.

In 1938 he published his first paper on the histology and development of chromatophores in amphibians, a field in which he continued to publish sporadically throughout his career. In 1949 he published his first paper on insects other than Lepidoptera, and from then on he wrote and published on many groups of insects. Most of these papers can be classified as dealing with pests and control, or with taxonomy and faunistics, but it was the Israeli fauna, including its pest species, that received most of his attention. In 1969 the Entomological Society of Israel published a Festschrift on the occasion of his 65th birthday.

In spite of his advanced years Bytinski continued his entomological studies and published three additional important papers: "The Vespoidea of Israel" (1971, coauthored by J. Gusenleitner), "The Sphecidae of Erez Israel, III." (1973, co-authored by J. de Beaumont) and "The Halictidae of Israel, II." (1974, co-authored by A.W. Ebmer).

Two of his publications deserve special mention. Because he was a dedicated collector of fossils and educated in paleontology, it is surprising that Bytinski himself published only one short paper in this field. It dealt with the discovery

in Israel of rather recent remains of *Hippopotamus.* The other especially noteworthy publication was a small book, in Hebrew, on collecting and preparating insects. When it was published, in 1948, it filled a gap in local entomological practice, but nowadays, as it is out of print and somewhat dated, young entomologists are unfamiliar with it. Some pages are devoted to descriptions of field trips, including one in the Tel Aviv area. It is interesting to note that after 60 years, and despite the almost complete urbanization of the area, the same insects can still be found there, although some of them not as readily as before.

Shortly after he passed away, his daughter, Ruth decided both to commemorate her father and to continue his efforts to keep Israeli entomology alive by establishing at the TAU "The Bytinski Fellowship" for graduate students working on the insect collection for their degree. Several Ph.D. students have benefited from this fellowship to date, and while this biography is being written, we are preparing for the 20th anniversary and memorial ceremony that will take place toward the end of 2006.

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62. Bytinski-Salz, H., 1961. *Micrococcus bodenheimeri* n. sp. Bulletin of the Research Council of Israel, 10B: 90-96.
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Remark 1:
Rivnay (1969: 211) mentioned the following two papers: Bytinsky-Salz, H., 1936. Lo sviluppo della coda negli Anfibi. I. II. Rend. Az. Naz., 24: 34-40, and Bytinsky-Salz, H., 1936. Lo sviluppo della coda negli Anfibi. III. IV. Rend. Az. Naz., 24: 82-88.
The first reference fits the pagination of part I of that article, the second reference that of the part II. We searched in vain among the reprints of Bytinski-Salz for the III and IV part of that article. These works are also not cited in the "Zoological Record".

Remark 2:
This circular was authored by the "staff" of the Agricultural Research Station. Bytinski-Salz placed this work among the papers of which he was the (co-) author, therefore we have included it in his list of publications.

New Taxa described by Hanan (Hans) Bytinski-Salz (in chronological order)
Prof. Bytinski-Salz decribed in 14 articles 168 new taxa, these include generic, specific, subspecific and infrasubspecific names. The infrasubspecific taxa include races, varieties (var.), forms (f.) and aberrations (ab.). Today such infrasubspecific entities are no longer accepted in zoological nomenclature; however, in the years Bytinski-Salz described them they were commonly in use to indicate many differences below the rank of subspecies. In a few cases incorrect spellings have been emended in order to fit the requirements of Art. 32.5.2 of the International Code of Zoological Nomenclature.

Ein Beitrag zur Kenntnis der Lepidopterenfauna Sardiniens:
Acronycta euphorbiae var. *acerbata* ab. *farinosa* Bytinski-SAlz, 1934
Anaitis sardalta Bythinski-Salz, 1934

Cidaria (Euphyia) bistrigata ab. *beata* Bytinski-Salz, 1934
Cidaria (Euphyia) bistrigata ab. *paulae* Bytinski-Salz, 1934
Cidaria (Euphyia) bistrigata ab. *selmae* Bytinski-Salz, 1934
Porphyrinia (Talpochares) elychrysi var. *dannehli* Bytinski-Salz, 1934
Porphyrinia (Talpochares) elychrysi var. *schawerdae* Bytinski-Salz, 1934
Tephrina (Eubolia) assimiliaria var. *sardalta* Bytinski-Salz, 1934
Tephrina (Eubolia) assimiliaria var. *sardalta* ab. *delineate* Bytinski-Salz, 1934

New Heterocera from Asia Minor:
Amathes hypotaenia Bytinski-Salz, 1935
Amathes hypotaenia var. *wiltshirei* Bytinski-Salz, 1935
Archanara wiltshirei Bytinski-Salz, 1935
Archanara wiltshirei f. *brunnea* Bytinski-Salz, 1935
Bryophila ravula f. *mediochracea* Bytinski-Salz, 1935
Cerura hoeferi Bytinski-Salz, 1935
Diaphora mendica malatiana Bytinski-Salz, 1935
Phytometra generosa f. *malatyana* Bytinski-Salz, 1935
Praestilbia armeniaca f. *designata* Bytinski-Salz, 1935
Pygaera pigra var. *ferruginea* f. *flavidior* Bytinski-Salz, 1935
Zygaena corycia race *wiltshirei* Bytinski-Salz, 1935
Zygaena corycia race *amseli* Bytinski-Salz, 1935

New Lepidoptera from Iran:
Abraxas wehrlii Bytinski-Salz & Brandt, 1937
Abraxas wehrlii ab. *asignata* Bytinski-Salz & Brandt, 1937
Adopaea pfeifferi Bytinski-Salz & Brandt, 1937
Aegle iranica Bytinski-Salz, 1937
Anaitis obsitaria var. *pseudopallidata* Bytinski-Salz & Brandt, 1937
Armada tarachoides Bytinski-Salz & Brandt, 1937
Brandtina Bytinski-Salz & Brandt, 1937
Brandtina albonigra Bytinski-Salz & Brandt, 1937
Bryophila argentacea Bytinski-Salz & Brandt, 1937
Catocala (Blepharum) fredi Bytinski-Salz & Brandt, 1937
Chilades trochylus persa Bytinski-Salz & Brandt, 1937
Chilades trochylus persa ab. *pauper* Bytinski-Salz & Brandt, 1937
Cymatophora osthelderi Bytinski-Salz & Brandt, 1937
Cymatophora osthelderi ab. *farinosa* Bytinski-Salz & Brandt, 1937
Eilicrinia cordiaria f. *astigmaria* Bytinski-Salz & Brandt, 1937
Eulocastra schah Bytinski-Salz & Brandt, 1937
Euxoa temera leucotera Bytinski-Salz & Brandt, 1937
Lithostege griseata var. *gigantea* Bytinski-Salz & Brandt, 1937
Lithostege griseata var. *gigantea* f. *transversaria* Bytinski-Salz & Brandt, 1937
Lycaena (Glaucopsyche) panagaea ahasveros Bytinski-Salz & Brandt, 1937
Ortholitha elbursica Bytinski-Salz & Brandt, 1937
Pieris ergane elbursina Bytinski-Salz & Brandt, 1937

Polia oleracea f. *pallida* Bytinski-Salz & Brandt, 1937
Polia w-latinum var. *umbrosa* Bytinski-Salz & Brandt, 1937
Porphyrinia boursini Bytinski-Salz & Brandt, 1937
Porphyrinia draudti Bytinski-Salz & Brandt, 1937
Pseudohadena banghaasi Bytinski-Salz & Brandt, 1937
Scopula iranaria Bytinski-Salz & Brandt, 1937
Scopula iranaria ab. *depuncta* Bytinski-Salz & Brandt, 1937
Tephroclystia prouti Bytinski-Salz & Brandt, 1937
Thanaos elbursina Bytinski-Salz & Brandt, 1937

Secondo contributo alla conoscenza della lepidotterofauna della Sardegna:
Agrotis puta predotai Bytinski-Salz, 1937
Agrotis schawerdai Bytinski-Salz, 1937
Anaitis corsalta var. *pseudoplagiata* Bytinski-Salz, 1937
Antitype canescens asphodeli f. *limbara* Bytinski-Salz, 1937
Aporophyla australis morosa f. *transversa* Bytinski-Salz, 1937
Autophila beriai Bytinski-Salz, 1937
Boarmia bastelicaria f. *aestivalis* Bytinski-Salz, 1937
Bryophila muralis ab. *turatii* Bytinski-Salz, 1937
Celerio euphorbiae dahlii ab. *mediofascia* Bytinski-Salz, 1937
Cerastis faceta ab. *livida* Bytinski-Salz, 1937
Cerastis witzenmanni plumbina ab. *castaneonigra* Bytinski-Salz, 1937
Cerastis witzenmanni plumbina ab. *castaneotransversa* Bytinski-Salz, 1937
Cerastis witzenmanni plumbina ab. *nigra* Bytinski-Salz, 1937
Cerastis witzenmanni plumbina ab. *olivinotransversa* Bytinski-Salz, 1937
Cerastis witzenmanni plumbina ab. *plumbinotransversa* Bytinski-Salz, 1937
Cidaria basochaesiata f. *annulata* Bytinski-Salz, 1937
Cidaria basochaesiata f. *transversa* Bytinski-Salz, 1937
Cidaria frustata griseoviridis f. *transversa* Bytinski-Salz, 1937
Cidaria malvata f. *bimaculata* Bytinski-Salz, 1937
Cidaria malvata f. *interrupta* Bytinski-Salz, 1937
Cidaria malvata f. *mediofumata* Bytinski-Salz, 1937
Cidaria malvata f. *nigrofasciata* Bytinski-Salz, 1937
Compsotera opacaria ab. *intermediaria* Bytinski-Salz, 1937
Euchloris sardinica ab. *ocellata* Bytinski-Salz, 1937
Euchloris sardinica ab. *schleppniki* Bytinski-Salz, 1937
Gnophos benesignata f. *uniformis* Bytinski-Salz, 1937
Hemerophila japygiaria f. *pseudosagarraria* Bytinski-Salz, 1937
Horisme predotai Bytinski-Salz, 1937
Horisme predotai ab. *nigra* Bytinski-Salz, 1937
Horisme tersata var. *insularis* Bytinski-Salz, 1937
Hydroecia xanthenes f. *lecerfi* Bytinski-Salz, 1937
Hydroecia xanthenes ab. *umbra* Bytinski-Salz, 1937
Lithina binaevata f. *adustata* Bytinski-Salz, 1937
Lithina binaevata f. *transversata* Bytinski-Salz, 1937

Lithosia sordidula f. *nana* Bytinski-Salz, 1937
Metrocampa honoraria var. *reisseri* Bytinski-Salz, 1937
Pyropteron chrysidiformis f. *fervens* Bytinski-Salz, 1937
Ortholitha proximaria ab. *angustifasciata* Bytinski-Salz, 1937
Ortholitha proximaria ab. *basiconfluens* Bytinski-Salz, 1937
Ortholitha proximaria ab. *medioconfluens* Bytinski-Salz, 1937
Ortholitha proximaria ab. *mediofasciata* Bytinski-Salz, 1937
Ortholitha proximaria ab. *omniconfluens* Bytinski-Salz, 1937
Rhyacia jordani rufescentior Bytinski-Salz, 1937
Rhyacia kermesina f. *viridibrunnea* Bytinski-Salz, 1937
Roeselia albula f. *albata* Bytinski-Salz, 1937
Zygaena corsica sardiniensis ab. *bielongata* Bytinski-Salz, 1937
Zygaena corsica sardiniensis ab. *minor* Bytinski-Salz, 1937

On *Rhyacia festiva*, Schiff., ssp. *conflua*, Tr., and ssp. *thulei*, Stgr.:
Rhyacia festiva ab. *conjuncta* Bytinski-Salz, 1939
Rhyacia festiva ab. *transversa* Bytinski-Salz, 1939
Rhyacia festiva var. *orkneyensis* Bytinski-Salz, 1939
Rhyacia festiva var. *orkneyensis* ab. depicta Bytinski-Salz, 1939
Rhyacia festiva var. *pseudoconflua* Bytinski-Salz, 1939
Rhyacia festiva thulei ab. *nigrostriata* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *glabrina* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *hethlandica* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *maculata* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *nigra* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *primuloides* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *rufobsoleta* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *rufonigra* Bytinski-Salz, 1939
Rhyacia festiva thulei f. *unicolor* Bytinski-Salz, 1939

New and little known forms of *Hepialus* mostly fromGreat Britain:
Hepialus fusconebulosus ab. *latefasciatus* Bytinski-Salz, 1939
Hepialus fusconebulosus ab. *ornatus* Bytinski-Salz, 1939
Hepialus hecta ab. *confluens* Bytinski-Salz, 1939
Hepialus hecta ab. *inversa* Bytinski-Salz, 1939
Hepialus hecta ab. *ornata* Bytinski-Salz, 1939
Hepialus humuli ab. *roseoornata* Bytinski-Salz, 1939
Hepialus humuli thulensis f. *albida* Bytinski-Salz, 1939
Hepialus humuli thulensis f. *uniformis* Bytinski-Salz, 1939
Hepialus lupulinus ab. *latemarginatus* Bytinski-Salz, 1939

New and little known Asiatic Phalaenoidea:
Chelonomorpha japona kansuana Bytinski-Salz, 1939
Eusemia adulatrix ab. *postnigra* Bytinski-Salz, 1939
Eusemia distincta tatsienlouica Bytinski-Salz, 1939

Eusemia lectrix ab. *reducta* Bytinski-Salz, 1939
Eusemia nipalensis ab. *semiclara* Bytinski-Salz, 1939
Eusemia nipalensis f. *hainani* Bytinski-Salz, 1939
Seudyra subflava japonica Bytinski-Salz, 1939

New Amatidae from Asia:
Amata compta f. *szechuana* Bytinski-Salz, 1939
Amata menia Bytinski-Salz, 1939
Amata sinana Bytinski-Salz, 1939
Amata sperbius gressitti Bytinski-Salz, 1939
Amata sperbius septentrionalis Bytinski-Salz, 1939
Amata susa Bytinski-Salz, 1939
Amata wiltshirei Bytinski-Salz, 1939
Callitomis dimorpha Bytinski-Salz, 1939
Callitomis dimorpha f. *nigerrima* Bytinski-Salz, 1939

New species and forms of Palaearctic Bombycine moths:
Arctornis l-nigrum ussurica Bytinski-Salz, 1939
Drepana curvatula f. *gaedei* Bytinski-Salz, 1939
Drepana falcataria var. *scotica* Bytinski-Salz, 1939
Euproctis karghalica ab. *depuncta* Bytinski-Salz, 1939
Euproctis karghalica ab. *nigrofasciata* Bytinski-Salz, 1939
Exaereta ulmi var. *istriaca* Bytinski-Salz, 1939
Lasiocampa quercus ab. *bifasciata* Bytinski-Salz, 1939
Lasiocampa quercus ab. *defascia* Bytinski-Salz, 1939
Methystria nigromacularia ab. *nigrofasciaria* Bytinski-Salz, 1939
Odontosia sieversi ussurica Bytinski-Salz, 1939
Pseudomicronia tibetana Bytinski-Salz, 1939

Prionotheca coronata Ol. *freyi* ssp.nov.:
Prionotheca coronata freyi Bytinski-Salz, 1955

The Sphecidae (Hymen.) of Erez Israel. I:
Ammophila (Ammophila) pseudonasuta Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Ammophila (Eremochares) algira ab. *bituberculata* Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Ammophila (Eremochares) sacra Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Ammophila (Podalonia) marismortui Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Bembix cinctella enslini Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Bembix holoni Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Bembix joeli Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955

Bembix dahlbomi sabulosa Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Bembix turca picturata Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Stizoides verhoeffi Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955
Stizus ruficornis eremicus Bytinski-Salz in de Beaumont & Bytinski-Salz, 1955

Coleoptera and Hymenoptera from a journey through Asia Minor Part II:
Palarus beaumonti Bytinski-Salz, 1957

The Sphecidae (Hymen.) of Erez Israel. II:
Philanthus (Philanthus) ammochrysus psammophilus Bytinski-Salz in de Beaumont & Bytinski-Salz, 1959
Philanthus (Philanthus) coronatus orientalis Bytinski-Salz in de Beaumont & Bytinski-Salz, 1959
Philantus (Philanthus) schulthessi nigrinus Bytinski-Salz in de Beaumont & Bytinski-Salz, 1959
Philanthus (Philanthinus) theodori Bytinski-Salz in de Beaumont & Bytinski-Salz, 1959
Philanthus (Philanthus) variegatus nabataeus Bytinski-Salz in de Beaumont & Bytinski-Salz, 1959

Micrococcus bodenheimeri n. sp.:
Micrococcus bodenheimeri Bytinski-Salz, 1961

Towards a checklist of taxa named after Hanan (Hans) Bytinski-Salz
Between 1934 and 2002 at least 39 taxa have been described in honor of Prof. H. Bytinski-Salz: one genus, 33 species and four subspecies. These eponyms are listed in chronological order. In three instances the original specific name: *bytinski-salzi*, has been emended to *bytinskisalzi* according to Art. 32.5.2.3 of the International Code of Zoological Nomenclature

Scoparia perplexella ab. *bytinskiella* Schawerda in Bytinski-Salz, 1934
Eupithecia bytinskii Prout, 1939
Tephronia bytinskii Wehrli, 1939
Osmia bytinskii Mavromoustakis, 1948
Euodynerus salzi Giordani Soika, 1952
Leptochilus bytinskii Giordani Soika, 1952
Selenocephalus bytinskii Lindberg, 1953
Ammobates bytinskii Mavromoustakis, 1954
Bembecinus bytinskii de Beaufort, 1954
Bytinskia Mavromoustakis, 1954
Clytus bytinskii Heyrovsky, 1954
Colletes bytinskii Noskiewicz, 1955
Miscophus bytinskii Verhoeff, 1955

Eucharis (Eucharisca) bytinskisalzi Boucek, 1956
Athetis salzi Boursin, 1936
Sphenoptera bytinskii Obbenberger, 1956
Teratolytta bytinskii Kaszab, 1957
Zonitis bytinskii Kaszab, 1957
Chrysis bytinskii Linsenmaier, 1959
Euchrous moricei bytinskii Linsenmaier, 1959
Hedychridium bytinskii Linsenmaier, 1959
Hedychrum luculentum bytinskii Linsenmaier, 1959
Onthophagus bytinskii Balthasar, 1960
Myrmilla bytinskii Invrea, 1965
Smicromyrme bytinskii Invrea, 1965
Nannaporus bytinskii Priesner, 1966
Andrena bytinskii Warncke, 1969
Antennoseius bytinskii Costa, 1969
Decapotoma argentifera bytinskii Kaszab, 1969
Kermes bytinskii Sternlicht, 1969
Meloe (Mesomeloe) bytinskii Kaszab, 1969
Carabus (Chaetomelas) bytinskii Schweiger, 1970
Prionospio salzi Laubier, 1970
Pterocheilus bytinskii Gusenleitner, 1970
Anoxoides bytinskisalzi Petrovitz, 1971
Aphodius bytinskisalzi Petrovitz, 1971
Longitarsus bytinskii Furth, 1979
Dufourea bytniskii Ebmer, 1999
Belomicroides bytinskii Antropov, 2002

Acknowledgments

We are indebted to many friends, colleagues, and staunch supporters who are always there for us. We are particularly grateful to the former Chair of the Board of Governors of Tel Aviv University, Michael Steinhardt, and to Judy Steinhardt, for their generosity and their unwavering support and friendship. Their kindness as well as their patience and understanding, are key to our success; we are incredibly lucky to have them with us.

We are also very grateful to Lynn Schusterman for her generous gift on the event of Michael Steinhardt's birthday; it is helping us share our treasures with the public.

We thank the Minister of Environmental Protection, MK Gideon Ezra, and the Director-General of the Ministry, Shai Avital, for their commitment and initiative. Their support is invaluable. We also thank the Minister of Tourism, MK Isaac Herzog and the Director-General of the Ministry, Nachum Itzkovich, the Minister of Agriculture and Rural Development, MK Shalom Simhon, and the Director-General of the Ministry, Yael Shaaltieli, and the Director-General of the Ministry of Science, Culture & Sport, Eytan Broshi. We are grateful for their, interest, enthusiasm and good will, and hope they help us realize our chief goal – to build a proper facility for the National Collections of Natural History and the associated research and public activities.

The collections faculty and staff are part of a large and active Research University that has always been home to us. We thank Shimshon Shoshani, until recently member of the Board of Directors of Tel Aviv University, for the benefit of his wisdom, experience, and help. His advice has been invaluable.

We thank our President, Itamar Rabinovich, and Director-General, Gideon Langholtz, for their ongoing interest and involvement in our project. We are deeply indebted to the Rector of Tel Aviv University, Dany Leviatan, for his

commitment and activities to secure the future of the National Collections of Natural History at Tel Aviv University as an active research infrastructure. We are also very grateful to the Vice-Rector, Raanan Rein, for his interest and support.

We are deeply grateful to our many friends in Tel Aviv University's administration, from top echelons down, whose friendship and support have helped us through difficult days; sharing information, editing documents, providing organizational wisdom, financial understanding, and psychological insight, offering sage advice and empathy, they have brightened our days, have helped us endure hardships with a smile, and have given us the strength to persevere.

We are part of a robust academic community that cares for our activities, and we are grateful to our many colleagues in the Departments of Zoology, Plant Sciences, and Anatomy and Anthropology, with whom we teach and collaborate in research, and who are ever ready to support our endeavors. We are particularly indebted to the Heads of these Departments – Abraham Hefetz, Daniel Chamovitz, and Yoel Rak - for their friendship, support, and collegiality. We are also pleased at the increasing cooperation with the Institute of Archeology and Ancient Near Eastern Cultures.

In the past years we have received financial support as well as curatorial positions 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 other VATAT members. We also thank the Director-General of VATAT, Steven Stav, and his dedicated staff – Merav Shaviv, Avital Blajwas, Shira Navon, Yael Siman-Tov, Amir Gat, and Uri Solomonovich – for their constructive and professional attitude as well as their enthusiasm and warmth.

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, 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. Rafael Meschoulam continued his constructive activity towards promoting the collections and we are as ever grateful to him as well as to the other committee members and observers – Reuven Merhav, Aharon Kaplan, 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 and effort to this project.

Our collections enjoy the support of many friends outside Tel Aviv University. We thank the Deputy Director-General of the Ministry of Environmental Protection, Yoram Horowitz, and the comptroller, Tzahi Malach, for their enthusiasm and support and for guiding us through the intricacies of government bureaucracy. We also thank Ofer Kol and Guy Samet for their help and advice. And of course, we are as ever grateful to our longstanding friends, Yeshayahu Bar-Or, the Chief Scientist of the Ministry, and Menachem Zalutzki, head of the Open Space Division of the Ministry of Environmental Protection, for their interest, support, and scientific cooperation.

We also recognize our colleagues and friends in government ministries for their growing interest and cooperation. We are very grateful to the Chief Scientist of the Ministry of Science, Culture & Sport, Mina Teicher, for her interest and input. We are especially indebted to Husam Massalha of the Ministry of

Science, Culture & Sport for his longstanding support and collegiality, and to Idit Amihai, Head of the Museums and Virtual Arts Department, for her interest, advice and support. We 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.

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 Jacob Garty, are our allies and partners in our efforts to promote biodiversity research and literacy.

We acknowledge the support of the Steering Committee of Nature Campus, Chaired by the Dean of Life Sciences, Yoel Kloog, coordinated until recently by Iris London-Zolty, and 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, Abraham Hefetz, 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, 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: Daniel 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, Head of 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 Constantiner School of Education, Yoel Rak, Head of the Department of Anatomy and Anthropology, Eliora Ron from Department of Molecular Microbiology and Biotechnology, Marcelo Sternberg from the Department of Plant Sciences, and Tamar Dayan from the Department of Zoology and Director of the Natural History Collections.

Yehudit Shvili of the Price-Brodie initiative has aided our fruitful cooperation with the community and schools of Yafo. We thank Daniel Bar-Eli of the UNESCO office in Israel, and the education teams of the Society for the Protection of Nature in Israel and the Israel Nature and Parks Authority for their support, their friendship, and their constructive engagement in many of our projects.

During 2005/2006 Nature Campus activities enjoyed the invaluable financial support of the Ministry of Education, the Ministry of Science, and the Ministry of Justice: Department of the Public Trustee and the Official Receiver and the Government Advertising Agency – Lapam.

Finally, it is our pleasure to thank Martin Weyl, a longstanding and very special friend of the collections who has been there for us for some years now sharing his experience and expertise with us. His friendship and support have been invaluable.

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 2005/2006 publications, alas, is also incomplete; it includes all publications of TAU members affiliated with the collections (whether they are directly collections-based on not), and under-represents publications of individuals from other institutions, since our follow-up is far from complete.

Refereed articles

1. Ahyong, S.T., and Galil, B.S., 2006. First Mediterranean record of the Indo-West Pacific mantis shrimp, *Clorida albolitura* Ahyong and Naiyanetr, 2000 (Stomatopoda, Squillidae). Aquatic Invasions 1(3):191-193.
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7. Brokovich, E., Baranes, A. & Goren M. Habitat structure determines coral reef fish assemblages at the northern tip of the Red Sea. Ecological Indicators 6:494-507.

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Accepted for publication

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3. Orlov-Labkovsky, O. and all. 2006. "Atlas of the fossilized fauna and flora of the Uzbekistan" (in three volumes). Volume 2 - "Upper Paleozoic". Biostratigraphy of the Carboniferous system and foraminifers of the Serpukhovian, Bashkirian and Moscovian stages. Tashkent. (English, Russian and Uzbek).

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2005 Afforestation in Mediterranean ecosystems: The role of semi-natural afforested habitats in supporting native plants and arthropods. Proceedings of the 1-st DIVERSITAS Open Science Conference, Mexico (Levanony, T, Columbus, E., Mandelik, T., Chikatunov, V. Zonstein, S. and Dayan, T.).

2005 Cervical vertebral body (C3-C7) morphology: A skeletal population study.Sixth Research Fair, Sackler Faculty of Medicine,

Tel-Aviv University. Abstract Book, p.5 (Ezra D, Salame H, Mashrawi Y, Peleg S, Steinberg N, Dar G, Been E, Medleg. B, Hershkovitz I.).

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2005 The 18th Convegno Annuale della Societá Lichenologica Italiana (SLI), Trieste, Italy (Garty, J.).

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2005 The 135th Annual Meeting of the American Fisheries Society. Anchorage, Alaska. (Goren, M.).

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2005 The 7th International Conference on Acid Deposition, Acid Rain 2005, Prague, Czech Republic (Garty, J.).

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2006 A Genetic and morphomertric comparison among populations of some cichlid species in Israel. 42th meeting of the Zoological Society of Israel. Rehovot, (Israel) (Shitenberg A., Goren M. and Huchon D.).

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2006 Can fish eat stones? The Third Annual Meeting of the Israeli Association for Aquatic Studies. May 23rd. Haifa, Israel. (Gueta Y. and M. Goren)

2006 Coleoptera collected by pheromone trap in different natural zones of Israel. The 25-th Meetingue the Entomologacal Society of Israel. Hebrev University, Rehovot, Faculty of Agriculture. (Chikatunov, V., Zarabi, L., Goffman, A. and Klein, Z.).

2006 Comperative skeletal features between Homo Floresiensis and patients with Laron Syndrome. XVI Paleopathology Association

European Meeting, Santorini, Greece (Hershkovitz. I, Kornreich. L, Laron, Z.).

2006 Coral inhabiting barnacles from the Gulf of Eilat- Phylogenetic aspects. Workshop on the High Biodiversity of the Gulf of Aqaba (Eilat): Origins, Dimensions and Protection. Jerusalem-Eilat, (Israel) (Simon-Blecher N., Brickner I., Huchon D. and Achituv Y.).

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2006 Facet and interfacet shape and orientation in spondylolysis: a skeletal study. The SSE Annual Meeting EuroSpine; Istanbul, Turkey (Masharawi Y; Dar G; Peleg S; Steinberg N; Medleg B; Ezra D; Alperovitch-Najenson D; Hershkovitz I.).

2006 Facet and interfacet shape and orientation in spondylosis: a skeletal study. Sevens Research Fair, Sackler Faculty of Medicine, Tel-Aviv University (Masharawi Y, Dar G, Peleg S, Steinberg N, Medlej B, Ezra D, Alperovitch-Najenson D, Hershkovitz I.).

2006 Feeding strategy of fishes in the Jordan River system. The 42nd Conference of the Zoological Society of Israel. January, 1st, Rehovot, Israel. (Gueta Y. and M. Goren.)

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2006 Muscle atrophy and low back pain: A CT study. The Radiological Society of North America (RSNA) meeting. Nov (Alperovitch-Nejenson D, Peled N, Masharawi Y,Robinson D, Kalichman L, Steinberg N, Hershkovitz I.).

2006 Ossous changes with age in the vertebral foramen of the cervical spine (C3-C7): a skeletal population study. Sevens Research Fair, Sackler Faculty of Medicine, Tel-Aviv University (Ezra D, Salame K, Peleg S, Been E, Marom A, Steinberg N, Alpeprovich-Najenson D, Dar G, Medlej B, Hershkovitz I.).

2006 Pooled Double Sampling: A new approach for estimating chukar (*Alectoris Chukar*) density. 42nd meeting of the Zoological Society of Israel, Rehovot, Israel (Nitzan, R., N.J. Aebischer, T. Dayan, and A. Ar).

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2006 Rhynchitidae and Attelabidae (Coleoptera: Curculionoidea) of Israel. The 25-th Meetingue the Entomologacal Society of Israel. Hebrev University, Rehovot, Faculty of Agriculture. (Friedman, A. L. L. and Legalov A. A.).

2006 Sacroiliac joint fusion: clinical implications. The Israel Radiological Association Conference (Peled N, Gaspar T, Dar G, Peleg S, Masharawi Y, Steinberg N, Hershkovitz I.).

2006 Seasonal and spatial distribution of Noctuidae Moths (Noctuidae: Lepidoptera) in Northern and Central Arava Valley, Israel. The 25th Meeting of the Entomological Society of Israel. 18.10.2006, Hebrew University, Rehovot, Faculty of Agriculture. (Kravchenko, V., Müller, G., Freidberg, A. and Yarom, I.).

2006 The ecology of the Plusiinae (Lepidoptera: Noctuidae) of Israel with special reference to pest species. The 25th Meeting of the Entomological Society of Israel. 18.10.2006, Hebrew University, Rehovot, Faculty of Agriculture. (Seplyarsky, V., Kravchenko, V. and Müller, G.).

2006 The effects of competition and predation risk on the foraging behavior of three species of rocky desert rodents. 42nd meeting of the Zoological Society of Israel, Rehovot, Israel (Levy, O., T. Dayan, and N. Kronfeld-Schor).

2006 The faunal remains from the Early Pre-Pottery Neolithic site of Motza – gazelle hunting and exploitation patterns. 42nd meeting of the Zoological Society of Israel, Rehovot, Israel (Sapir, L., G. Bar-Oz, and T. Dayan).

2006 The performance of small "Non-carbon-dioxide" mosquito-traps under in and out-door conditions. Poster on 72nd Annual Meeting (February 26—March 2, 2006) of the AMCA (The American Mosquito Control Association) in Detroit, Michigan, USA. (Müller G., Junnila A., Kravchenko V., and Schlein Y.).

2006 The shape of the neural arch as a causative factor in the isthmic spodylosis: characterization and biomechamical implications. Physical Therapy in Sport-International Conference; Birmingham, UK (Masharawi Y, Alperovitch-Najenson D, Dar G, Peleg S, Steinberg N, Salame K, Hershkovitz I.).

2006 The Wilderness Idea. Society for the Protection of Nature in Israel annual staff seminar (Y.Gavrieli).

2006 The zoogeography and habitat preferences of the Catocalinae (Lepidoptera: Noctuidae) of Israel. The 25th Meeting of the Entomological Society of Israel. 18.10.2006, Hebrew University, Rehovot, Faculty of Agriculture. (Seplyarsky, V., Kravchenko, V. and Müller, G.).

2006 Aleurodid fauna of Israel - commercially important species (a poster). Annual meeting of the Israeli Entomolgical Society (Gerling, D.).

2006 ARC Centre of Excellence- first scientific annual board meeting, Townsville, Australia. (Y. Loya).

2006 Fish net pen mariculture and the coral reefs of Eilat: a sad story. Palau Coral reef workshop, Koror. (Y. Loya).

2006 Identification of mitochondrial introns in sponges (Porifera). 42th meeting of the Zoological Society of Israel. Rehovot, (Israel) (Huchon D., Rot C., Goldfarb I. and Ilan M.).

2006 IOC-GEF/World Bank working group on coral bleaching Workshop, Paris. (Y. Loya).

2006 Net pen fish farming and coral reefs: An unhappy marriage. 2006 ISRS (International Society for Reef Studies) European Meeting Bremen, Germany. (Y. Loya).

2006 The 4th International Workshop on Biomonitoring of Atmospheric Polllution (with emphasis on trace elements). Agios Nikolaos, Greece (Garty, J.).

2006 The Aleurodid fauna of Israel (a poster). Annual meeting of the Israeli Entomolgical Society (Gerling, D.).

2005 How do point sources affect simple community structure parameters of stream macroinvertebrates? Proceedings of the 2005 ASLO summer meeting. Santiago de Compostela, Spain (Gafny, S., Solimini. A., Gerino, M., Marti, E., Battin, T., Morais, M., Pusch, M., Puig M.A., Sabater, F. and Voreadou C.).

2005 Hydro-morphological control on nutrient retention in European streams. Proceedings of the 2005 ASLO summer meeting. Santiago de Compostela, Spain (Vervier, P., Sauvage, S., Sanches-Perez, J.M., Gerino, M., Maneux, E.E., Battin, T., Gafny, S., Marti, E. and Morais, M.).

2005 Ecological distances as a tool to assess European human altered streams. Proceedings of the 2005 ASLO summer meeting. Santiago de Compostela, Spain (Morais, M., Pinto, P., Guilherme, P., Battin, T., Gafny, S., Puig M.A., Pusch, M., Sabater, F., Solimini. A. and Vervier, P.).

2005 Relationships between ecosystem functions (nutrient uptake length) and invertebrate diversity in stream reaches. Proceedings of the 2005 ASLO summer meeting. Santiago de Compostela, Spain (Gerino, M., Vervier, P., Sauvage, S., Sanches-Perez, J.M., Dumas, P., Battin, T., Gafny, S., Marti, E., Morais, M., and Puig M.A.).

2005 A multifactorial approach to examine factors influencing nutrient retention in human altered streams. Proceedings of the 2005 ASLO summer meeting. Santiago de Compostela, Spain (Sabater, F., Marti, E., Riera J.L., Battin, T., Gafny, S., Morais, M., Pusch, M., Sanches-Perez, J.M., Solimini. A. and Voreadou C.).

Graduate students

Much active scientific research is conductedby 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-	Liora Glass (E. Geffen and T. Dayan) The ecology of jungle cats in natural and anthropogenic habitats in Israel.
1999- 2006	Vered Shimony (O. Mokady) Establishment and maintenance of the head region in colonial hydroids.
2000-	Sharon Gild (O. Mokady) Invertebrate allorecognition.
2000-	Reuvat Nitzan (T. Dayan and A. Ar) Population dynamics of the chukar partridge in Israel.
2001-2006	D. Ezra (I. Hershkovitz) Aging of the cervical spine.
2001-	Tamar Feldstein (O. Mokady) Molecular level markers for biomonitoring the coastal environment.
2001-	N. Knopp (I. Hershkovitz) Dancer's injuries.
2001-2006	Lee Koren (E. Geffen and O. Mokady) Vocalization as an indicator of individual quality in rock hyrax.
2001-2006	Shimrit Perkol (Y. Benayahu) Spatial and temporal interactions between artificial and natural reefs.

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.

2003- Andrey Aaronov (M. Goren)
Ecology of fishes in Mediterranean rocky habitats.

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

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

2003- 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- Efrat Gavish (Y. Lubin, Ben Gurion University)
Description of new spiders species from the family Linyphiidae.

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

2004- Mati Halperin (Y. Benayahu)

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

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

2005 - B. Blihoghe (M. Ilan)
Natural products from sponge associated miscroorganisms.

2005- Motti Charter (Y. Leshem)

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

2005- O. Hay (I. Hershkovitz)
Evaluating lumbar spine condition via CT in individuals with lower back pain.

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

2006- Uri Roll (T. Dayan).
The influence of roads on the fauna and flora of Israel.

2006- Lidar Sapir (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.

MSc students

2001-2006 N. Bachrach (I. Hershkovitz)
The last Natufian inhabitants from El-Wad Terrace: Anthropological study.

2001-2006 G. Samora (I. Hershkovitz)
Cribra orbitalia in historic populations.

2002- 2005 Ifat Guata (M. Goren)
Energy flow in anthropogenic affected fish communities in Jordan River Basin.

2002- 2006 Neta Dasa (M. Goren)
Reproductive aspect in riverine fish.

2002-2006 Arian Wallach (M. Inbar and U. Shanas, Oranim Academic College)
Re-introduction of Roe Deer.

2003-2005 Zohar Leader (Y. Yom-Tov and Uriel Safriel).
The diet of the long-eared owl (*Asio otus*) and the barn owl (*Tyto alba*) in the Negev.

2003- 2005 Lior Shine (J. Garty and A. Hochman)
The biochemical and physiological response of lichens to air pollution.

2003-2006 Nili Angelister (Y. Yom-Tov and Uzi Motro).
The effect of human disturbance on rodent communities in the southern coastal plain.

2003- Shunit Gal (D. Gerling)
Variations within a species - *Bemisia tabaci* (due to parasitic bateria).

2003- Amir Gur (M. Ilan)
Iron deposition in sponges.

2003- Larisa Lerner (A. Freidberg)
Studies of Carpomyina (Tephritidae).

2003- Alon Rothschild (O. Mokady)
Molecular biomonitoring of toxic metals in the Kishon.

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

2004-2006 Yotam Bar (M. Goren)
Stability of fish community in Shiqmona.

2004-2006 Allen Daniel (Y. Loya)
Community structure of deep (50 m) scleractinian corals in Elat, Red Sea.

2004-2006 Ronit Justo-Hanani (T. Dayan and A. Tal)
Comparative legislation of invasive species.

2004-2004 Sara Cohen (M. Goren)
Diversity and dynamic of fish catch by trawlers off the Mediterranean Israeli coast.

2004-2006 Roee Segal (Y. Loya)
Molecular characteristics of the bleaching phenomenon of the Mediterranean stony coral Oculina patagonica.

2004-2006 Jonathan Sharon (Y. Benayahu with Prof. Y. Loya)
Benthic communities associated with an invasive bivalve in the Israeli Mediterranean Sea.

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 metabolires in nectar on ants.

2004- Shani Inbar (D. Huchon)
Identification of new nuclear markers to solve sponge phylogeny.

2004 Inbal Ginsburg (Y. Benayahu)
Farming of soft coral for reef rehabilitation purposes.

2004- Ariella Gotlieb (T. Dayan)
Ecological restoration of the Ze'elim wadi bed, near the Dead Sea.

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

2004- Ido Sella (Y. Benayahu)
Cultivation of the soft coral *Sarcophyton glaucum*.

2004- Amir Shitenberg (M. Goren)
Geographical variation in selected cichlid fish.

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

2004- Yael Zaldam (Y. Benayahu)
Colonization of fixed and floating artificial marine structures at Elat (Red Sea).

2004- Dror Zurel (Y. Benayahu)
Specificity of algal symbionts in horizontally acquired system.

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

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

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

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

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

2005- 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.

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

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

2005- Keren Shachar (Y. Benayahu)
Initial colonization phases of fixed and floating artificial marine structures at the Israeli Mediterranean coast.

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- Ophir Shneor (Y. Yom-Tov and D. Huchon).
The origin and timing of some migratory birds passing through Israel.

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

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

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

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

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- 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- Raj Singh (D. Huchon, Visiting Phd student)
Mitochondrial genome of Sylvioidea.

2006- Karin Tamar (T. Dayan).
Archeozoology of Tel Bet Shemesh.

2006- G. Tirosh (M. Ilan)
Sponge community in the Israeli Mediterranean coast.

Post-doctoral fellows

2006-2007 Yael Mandelik (T. Dayan)

2006 P. Sauleu (M. Ilan)

2004- Noam Leader (Y. Yom-Tov)

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.

1999-2006 The Ministry of the Environment and the Israel Nature and Parks Authority: Breeding of *Acanthobrama telavivensis* in captivity (M. Goren).

2001- Tobias Landau Foundation. Research project: Colonization of artificial reefs in Elat (Red Sea) (Y. Benayahu). -20% allocated for collections-based research.

2001-2005 Joint German – Israeli Research Project (BMBF and MOS). Anthropogenic impact on fish biodiversity in the Jordan River basin (M. Goren).

2001-2005 Nutrient cycling in streams: development of an expert system to assess stream water quality management. Israel Ministry of the Environment. 151,832 NIS. (S. Gafny).

2001-2005 Research grant from the Israel Scientific Foundation. The roles of ecological and physiological selective forces in shaping rhythm biology and community structure in a rocky desert rodent system (four year; $50,000 per annum) (T. Dayan and N. Kronfeld-Schor).

2001-2006 Joint German-Israeli Research Program in Environmental Research (GLOWA); as part of a proposal entitled: Impacts of global change on East-Mediterranean environs: an integrated assessment of hydrological, agricultural, ecological and socio-

economic aspects (five year grant; $45,000 per annum) (T. Dayan, M. Goren, and A. Freidberg).

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

2002-2005 International Arid Lands Consortium (IALC) ($100,000) (E. Geffen, M. Kam and G. Roemer).

2002-2005 International Arid Lands Consortium (IALC) ($100,000) (E. Geffen, M. Kam and G. Roemer).

2002-2005 Research grant from the Israeli Ministry of the Environment. Ecological impact assessment: Tools for evaluating the effects of development on biodiversity (three year grant at 80,000 NIS (ca. $18,000) per annum) (T. Dayan and Y. Mandelik).

2002-2006 BSF. Response of lichens to oxidative stress exerted by environmental adversities. 152,000 USD) (J. Garty, A. Hochman and B. Bradley).

2002-2006 Israel Science Foundation (ISF). Alternative feeding mechanism in corals: bacterial aggregate “gardening”. (Y. Loya and A. Kushmaro).

2003-2005 Ministry of Environment (P.I). for coordinating the committee and writing a National plan for biodiversity education. (40,000 NIS ca. $8,900) (Y. Gavrieli).

2003-2005 Research grant from the Jewish National Fund: The influence of different forestry regimes on biodiversity (Three year grant at 40,000 NIS (ca. $8,500) per annum) (T. Dayan and Y. Mandelik).

2003-2007 Israel Science Foundation (ISF)-"An integrative approach of studying bacterial coral bleaching in the coral reefs of Elat". (Y. Loya and E. Rosenberg).

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).

2004-2006 Marie Curie European Reintegration Grant (Brussels, Belgium) (M. Ilan and Y. Loya).

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.]).

2004-2007 US (MD) - Israel BARD - Binational Agricultural Research and Development Fund (Jerusalem, Israel) (M. Ilan, M. Shpigel and R. Hill).

2004-2007 USAID-CDR, Research Project: Scientifically based framework for conserving and monitoring the Eritrean coral-reefs (Y. Benayahu).

2004-2008 BSF - US - Israel Binational Scientific Foundation (Jerusalem, Israel). (M. Ilan and J. Aisenberg).

2004-2008 Israel Science Foundation (ISF). "The isotopic composition of Eilat's corals: basic aspects of signals buildup and tracing anthropogenic stress. (Co Y. Loya and A. Shemesh).

2005 Ministry of Justice: Department of the Public Trustee and the Official Receiver (P.I.). For science for all publications on the internet. (80,000 NIS ca. $18,000) (Y. Gavrieli).

2005 The Antiquities Authority research grant: Ongoing analysis of the faunal remains from the Neolithic of Motza (22,000 NIS [ca. $5000]) (T. Dayan).

2005- 2006 Pharma Mar, Spain. Research project: Collection of marine invertebrates from the coral reefs of Kenya (Y. Benayahu). -80% allocated for collections-based research.

2005 Ministry of Science (P.I.). For science for all program – Arab and Jewish children and Parents from Lod visiting Nature Campus. (15,000 NIS ca. $3,300) (Y. Gavrieli).

2005-2006 Israel Nature and National Parks Protection Authority (P.I). For developing booklet and lesson plans on nature and antiquities

conservation for Israel Defense Forces. (20,000 NIS ca. $4,400) (Y. Gavrieli).

2005-2007 Grant from the USDA (and other donators) to develop the Parasitica collection (D. Gerling).

2005-2007 International Arid Lands Consortium (IALC) ($100,000) (E. Geffen and G. Roemer).

2005-2007 Porter School of Environmental Studies in collaboration with the Italian Ministry of the Environment: Artificial Marine Structures (AMS): Multifunctional Tool for Research and Environmental Management in the Mediterranean and Red Sea (MED- RED) (Y. Benayahu, Y. Loya and A. Abelson) -20% allocated for collections-based research.

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).

2005-2009 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 Mekorot. Bio-management of water quality in reservoir (M. Goren).

2006 Ministry of Environment (P.I.). For developing an interpretation kit on Biodiversity for teachers. (35,000 NIS ca. $7,800) (Y. Gavrieli).

2006 Ministry of Environment (P.I.). For developing learning resources for the public on issues of Sustainable Development on the Internet. (150,000 NIS ca. $33,300) (Y. Gavrieli).

2006 Nature Reserves Authority. Biological documents and management programs of eight marine reserves along the Mediterranean coast of Israel (M. Goren).

2006 New-Faculty Equipment Grants. The Israel Science Foundation ($ 35,000). (D. Huchon).

2006 Grants from the Ministry of the Environment and the Israel Nature and Parks Authority "Survey of the little fire ant in Israel" (total of 45,000 NIS [ca. $10,000]) (T. Dayan and A. Hefetz).

2006 Ministry of Environment (P.I.). For developing an Internet site on Invasive Species of Israel. (20,000 NIS ca. $4,000) (Y. Gavrieli).

2006 Population identification of the migrating waves of three species of songbirds using molecular markers. German-Israeli Foundation (35,000 Euro) (D. Huchon).

2006 Sloan Foundation – The roots of violence (I. Hershkovitz).

2006-2007 Government Advertising Agency – Lapam (P.I). For developing Nature's Resources on the Web (150,000 NIS ca. $35,000) (Y. Gavrieli).

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).

2006-2007 The effect of aquatic recreation activity on macroinvertebrate and fish assemblage in water bodies of the Hula Valley. Israel Nature Reserve and Parks Authorities. 80,000 NIS (S. Gafny and M. Goren).

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).

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

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).

1969- National Representative in Scientific Committee of Oceanographic Research (SCOR) (L. Fishelson).

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- Curator Mollusc Collection, Dept. Evolution, Systematics and Ecology, Hebrew University of Jerusalem (H.K. Mienis).

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 editorial board 'Malacologia', U.S.A. (H.K. Mienis).

1975- Member of the Israel Ecological Society (L. Fishelson).

1976- Curator of the Fish collection, Zoological Museum, Tel Aviv University (M. Goren).

1976- Member editorial board 'Malacological Review', U.S.A. (H.K. Mienis).

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- Ministry of Agriculture, Plant Protection Department, Bet Dagan, identification of intercepted mollusca (H.K. Mienis).

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).

1983- Scientific Advisor of the Israel Nature and Parks Authority (M. Goren).

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

1984- European Anthropological Association (Hershkovitz I.).

1984- Israel Prehistoric Society (Hershkovitz I.).

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

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 the Botanical Society of Israel (J. Garty).

1986- Member of the Zoological Society of Israel (T. Dayan).

1987 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).

1988- 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- Member of the Zoological Society of Israel (O. Mokady).

1989- Paleoanthropology Society (Hershkovitz I.).

1989- Pre-clinical Advisor for New York Program medical students (Y. Rak)

1989- The Willi Hennig Society (elected fellow) (A. Freidberg).

1990- Deutsche Gesellschaft für Tropenoekologie (A. Freidberg).

1990- Member of the American Society of Mammalogists (T. Dayan).

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).

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).

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 Israel Society of Ecology (T. Dayan).

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 Corriculum Committe (Y. Rak)

1994- Research Associate of theOceanographic 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 Museum Committee in the Zoology Department (Y. Benayahu).

1996- Editor of the Journal of International Wildlife Law and Policy, Corresponding (M. Ilan).

1996- Member of the American Microscopical Society (Y. Benayahu).

1997- Member of the International Society for Research on Symbiosis (USA) (M. Ilan).

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 British Ornithologists' Union (Y. Yom-Tov).

1998-2005 Israel Journal of Zoology, Editor-in-Chief (M. Ilan).

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

1998- Israel Journal of Entomology, Editorial board (A. Freidberg).

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 Societas Internationalis Limnologiae (SIL) (M. Goren).

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

1999- Member editorial board 'Triton', Israel. (H.K. Mienis).

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

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 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- 2005 Head of the Faculty of Life Sciences Teaching committee (M. Ilan).

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 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 Man and Biosphere Committee, UNESCO (Y.Gavrieli).

2001- Member of the executive committee of the Zoological Society of Israel (M. Goren).

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

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- Educational Advising Committee, Society for the protection of Nature in Israel (Y.Gavrieli).

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

2001- Member of the Advisory committee for the Minister of the Environment's award for volunteers (T. Dayan).

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

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).

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

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

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

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

2002- Educational Advising Committee, Nature Center, Ramat Hanadiv (Y.Gavrieli).

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

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

2003- Elected Council Member, Society for the Protection of Nature in Israel (Y.Gavrieli).

2003- Head of the Department of Zoology (Y. Benayahu).

2003- 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).

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- Member of the Professional committee for biology teaching in the Ministry of Education, Israel (T. Dayan).

2003- Member of the Steering committee for "The environmental voice at the Judean Foothills", environmental community action in an area planned as a biosphere reserve (T. Dayan).

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

2004 - Correspond- member of the Subcommission on Carboniferous Stratigraphy of the International Commission on Stratigraphy (O. Orlov-Labkovsky).

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).

2004-2006 Member of the Board of Directors, the Uri Maimon Hugey Siyur, Keren Kayemet Le'Israel (KKL) (Y.Gavrieli).

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

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

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

2005- Chief editor of the Electronic Journal of Ichthyology, The bulletin of the European Ichthyological Society (M. Goren).

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- Identification of whiteflies for the Plant Protection Service. (D. Gerling).

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).

2005-2006	Planning Committee for a joint building for the natural history collections and the Porter School of the Environment, TAU (T. Dayan).
2005-2007	Member of the selection committee for Fulbright post-doctoral fellowships (T. Dayan).
2006-	Chair, Forum on Biodiversity and the Environment, under the auspices of the Israel Academy of Sciences and Humanities (T. Dayan).
2006-	Member of a scientific steering team assembled by the KKL Forest Department for the restoration of the forests in the north of Israel (T. Dayan).
2006	Member of the local organizing committee for a congress "Deserts & Desertification: Challenges & Opportunities" (T. Dayan).
2006-	Member of the Zoological Society of Israel (D. Huchon).
2006-	Review Committee, Ford Motor Company Conservation and Environmental Grants (Y. Gavrieli).
2006 Sep	Visiting Scientist in the Institute of Marine Sciences, University of Dar es Salaam (M. Ilan).
2006 Jan	Editor of the Israel Journal of Ecology and Evolution (M. Ilan).
2006-	Member of the Inter-University Institute Teaching committee (M. Ilan).

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 many parcels containing scientific materials were mailed abroad for researchers in their home institutions.

Date	Name	Institute	Country	Taxonomic group
2005-2006	Y. Nagar	Israel Antiquity Authority	Israel	Anthropology
2005 Dec	U. Bar-Ze'ev	I.M.S.	Israel	Molluscs
2005 Dec	H. Lubinevsky	University of Haifa	Israel	Molluscs
2005 Dec	O. Hazofe	Israel Nature and Parks Authority	Israel	Birds
2005 Dec	R. Milgalai	Hebrew University	Israel	Birds
2006 Jan	Y. Sinai	Israel Nature and Parks Authority	Israel	Molluscs
2006 Jan	T. Pavlicek	University of Haifa	Israel	Molluscs
2006 Jan	U. Galili	Israel Antiquity Authority	Israel	Molluscs
2006 Jan	Z. Brosh	Israeli Air Force	Israel	Birds
2006 Feb	N. Lev-Tov	Hebrew University	Israel	Anthropology
2006 Feb	U. Galili	Israel Antiquity Authority	Israel	Molluscs
2006 Feb	D. Zvieli	The Israeli Navy	Israel	Molluscs
2006 Feb	A. Gorzalczany	Israel Antiquity Authority	Israel	Molluscs
2006 Feb	Y. Nechushtai	Hebrew University	Israel	Invertebrates

Date	Name	Institute	Country	Taxonomic group
2006 Feb	O. Hazofe	Israel Nature and Parks Authority	Israel	Birds
2006 Mar	E. Sheffer	IOLR - Haifa	Israel	Molluscs
2006 Mar	D. G. Furth	National Museum of Natural History, Smithsonian Institution	USA	Entomology
2006 Mar	Y. Sinai	Israel Nature and Parks Authority	Israel	Molluscs
2006 Mar	R. Ortal	Israel Nature and Parks Authority	Israel	Molluscs
2006 Mar	Z. Brosh	Israeli Air Force	Israel	Birds
2006 Apr	U. Galili	Israel Antiquity Authority	Israel	Molluscs
2006 Apr	J. Webo	Leo poldina Hospital	Germany	Anthropology
2006 Apr	B. Rosen	University of Haifa	Israel	Molluscs
2006 May	K. Szpila	Nicolaus Copernicus University, Toruń	Poland	Entomology
2006 May	C. Bystrowski	Forest Research Institute, Warsaw	Poland	Entomology
2006 May	T. Kurz		Israel	Reptiles
2006 May	Y. Shrir	University of Haifa	Israel	Mammals
2006 May	A. Retner	University of Haifa	Israel	Mammals
2006 May- Jun	D. Radovcic	University of Michigan, Department of Anthropology	USA	Anthropology
2006 Jun	R. Pinhasi	School of Human & Life Sciences, Roehampton University, London	England	Anthropology
2006 Jun	P. Shur	Israel Antiquity Authority	Israel	Birds
2006 Jun	Y. Ben-Michael	Israel Antiquity Authority	Israel	Birds
2006 Jun	G. Bar-Oz	University of Haifa	Israel	Mammals
2005 Jun	A. Stutz	University of Michigan	Israel	Mammals

Date	Name	Institute	Country	Taxonomic group
2005 Jun	N. Munro	University of Connecticut	Israel	Mammals
2005 Jun	R. Shafir	University of Haifa	Israel	Mammals & Birds
2006 Jul	E. Heiman	I.M.S.	Israel	Molluscs
2006 Aug	F. Bocquentin	CNRS University of Bordeaux	France	Anthropology
2006 Aug	I. Baruch	Israel Antiquity Authority	Israel	Molluscs
2006 Aug	A. Glaser	Israel Electricity Company	Israel	Molluscs
2006 Aug	D. Kerem	University of Haifa	Israel	Mammals
2006 Sep	U. Bar-Ze'ev	I.M.S.	Israel	Molluscs
2006 Sep	D. Teger	Eretz Israel Museum	Israel	Mammals
2006 Sep	R. Rabinovich	Hebrew University	Israel	Mammals
2005 Sep	O. Hazofe	Israel Nature and Parks Authority	Israel	Birds
2006 Sep	M. Kovacic	Natural History Museum Rijeka	Croatia	Fishes
2006 Sep	D. Golani	Hebrew University	Israel	Fishes
2006 Oct	M. Wastaway	Department of Archaeology and Anthropology Australia National University	Australia	Anthropology
2006 Oct	L. Cowgill	Washington University st. Louis Department of anthropology	USA	Anthropology
2006 Oct	A. Oren	Faculty of Agricultural, Food and Environmental Quality Sciences	Israel	Mammals
2006 Dec	R. Pinhasi	School of Human & Life Sciences, Roehampton University, London	England	Anthropology

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.

Purpose	Name	Institute	Taxonomic group
Faunistics of birds and Amphibian (academic course)	Y. Yom-Tov	Tel Aviv University	Birds, Amphibia, Taxidermist and Museum Class
Systematic of Beetles	T. Assmann and C. Drees	Tel Aviv University Ben Gurion University	Entomology
Insects the Flagship of Biodiversity (academic course)	A. Freidberg and D. Simon	Tel Aviv University	Entomology
Faunistica (academic course)	M. Inbar	Technion	Birds, Mammals and Museum Class
Vertebrates Anatomy (academic course)	D. Eilam, M. Ovadia and U. Oron	Tel Aviv University	Reptilia, Mammals and Taxidermist
Introduction to Animal Kingdom: Invertebrates and Vertebrates (academic course)	M. Ovadia and A. Gasith	Tel Aviv University	Mammals and Entomology
The Invertebrates: Comparative Functional Biology (academic course)	M. Ilan, Y. Benayahu and A. Abelson	Tel Aviv University	Invertebrates, Entomology and Histology
Osteology And Anthropology (academic course)	I. Hershkovitz	Tel Aviv University	Anthropology

Purpose	Name	Institute	Taxonomic group
Physical Anthropology (academic course)	Y. Rak	Tel Aviv University	Anthropology
Human Evolution: fossil evidences (academic course)	Y. Rak	Tel Aviv University	Anthropology
Chapters in Human Evolution (academic course)	Y. Rak	Tel Aviv University	Anthropology
Ichthyology (academic course)	M. Goren	Tel Aviv University	Fishes and Museum Class
Biology and Systematic of Marine Invertebrates: (academic course)	Y. Benayahu	Interuniversity Institute for Marine Sciences	Invertebrates
Bird Fauna (academic course)	N. Leader	Open University	Birds and Museum Class
Guiding Students	G. Bar-Oz	University of Haifa	Mammals and Museum Class
Bird-Watching	T. Shariv	Avshalom Institute	Birds and Museum Class
Various seminars	North District	Israel Nature and Parks Authority	Mammals, Birds and Museum Class
Various seminars	Nature Campus	Tel Aviv University	Mammals, Birds, Entomology and Museum Class
Guided tours to schoolchildren	Nature Campus	Tel Aviv University	Mammals, Birds, Entomology and Museum Class

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 incomplete, but in the current conditions of under-staffing we are unable to dedicate the person-power to monitor and record all such activities.

Purpose	Name	Institute	Taxonomic group
Ttaxonomic guidance (learning the procedure)	V. Spriarsky	PPIS of the ministry of Agriculture	Entomology
Taxonomy Identification	A. Gasith	Tel Aviv University	Entomology and Invertebrates
Taxonomy Identification	E. Nevo & T. Pavlicek	University of Haifa	Entomology
Taxonomy Identification	M. Finkel	University of Haifa	Entomology
Taxonomy Identification	M. Vonshak	University of Haifa	Entomology
Taxonomy Identification		Plant Protection and Inspection Services	Entomology
Taxonomy Identification		Israel Nature and Parks Authority	Entomology
Taxonomy Identification	E. Groner	Ben-Gurion University	Entomology
Taxonomy Identification	I. Hoffman	Ben-Gurion University	Entomology
Taxonomy Identification	I. Renan	Ben-Gurion University	Entomology
Taxonomy Identification	U. Shanas	Oranim Academic College	Entomology
Taxonomy Identification	M. Inbar	Oranim Academic College	Entomology
Taxonomy Identification	E. van dan Brink	Israel Antiquity Authority	Molluscs

Purpose	Name	Institute	Taxonomic group
Taxonomy Identification	U. Galili	Israel Antiquity Authority	Molluscs
Taxonomy Identification	R. Ortal	Israel Nature and Parks Authority	Molluscs
Taxonomy Identification	T. Oron	Israel Nature and Parks Authority	Molluscs
Taxonomy Identification	S. Moran	Plant Protection and Inspection Services	Molluscs
Taxonomy Identification	A. Glaser	Israel Electricity Company	Molluscs
Taxonomy Identification	E. Sheffer	IOLR - Haifa	Molluscs
Taxonomy Identification	M. Charter	Tel Aviv University	Molluscs
Taxonomy Identification	North Distric	Israel Nature and Parks Authority	Fishes
Taxonomy Identification	I. Zohar	Tel Aviv University	Fishes
Taxonomy Identification	M. Sade		Birds
Taxidermist services	D. Eilam	Tel Aviv University	Birds, Mammals and Taxidermist
Taxidermist services	A. Lotem	Tel Aviv University	Birds and Taxidermist
Taxidermist services	Y. Leshem	Tel Aviv University	Birds and Taxidermist
Taxidermist services	Nature Campus	Tel Aviv University	Mammals, Birds and Taxidermist
Taxidermist services	O. Hazofe	Israel Nature and Parks Authority	Birds and Taxidermist
Photography	Israeli television	Aruz 2 News	All Collections
Photography for the Public Affairs Administration	Rava Eleasari	Tel Aviv University	All Collections
Electronic Data	B. Shaham	Hebrew University	Reptilia
Electronic Data	Neil	University of Malasia	Reptilia

Purpose	Name	Institute	Taxonomic group
Electronic Data	G. Kachila	Hebrew University	Mammals
Electronic Data	R. Rabinovich	Hebrew University	Mammals
Electronic Data	U. Motro and Y. Leshem	Hebrew University and Tel Aviv University	Birds
Electronic Data	M. Fain	University of Haifa	Invertebrates
Electronic Data For Biologic survey of 12 Marine Reserves	Science Division	Israel Nature and Parks Authority	Fishes and Invertebrates
Data and Tissue Samples	N. Leader	Tel Aviv University	Birds, Reptalia and Mammals
Shipment of Tissue Samples	R. W. DeBry	University of Cincinnati, Ohio	Molecular Systematics
Shipment of Tissue Samples	J. Schmitz	University of Muenster, Germany	Molecular Systematics
Shipment of Tissue Samples	R. Barrientos	Spain	Molecular Systematics
Shipment of Tissue Samples	S. Willows-Munto	Evolutionary Genomics Group, South Africa	Molecular Systematics
Shipment of Specimens	A. Driskell	Smithsonian Institution, USA	Invertebrates: Tunicates and Molecular Systematics
Shipment of Specimens	R.M. da Rocha	Universidade Federal do Parand', Brasil	Invertebrates: Tunicates
Shipment of Specimens	X. Turon	University of Barcelona, Spain	Invertebrates: Tunicates
Shipment of Specimens and Tissue Samples	R.J. Toonen	University of Hawaii at Manoa	Invertebrates: Soft Corals and Molecular Systematics
Shipment of Specimens	I.M. Mendez	Department of Cell Biology, Spain	Invertebrates: Soft Corals
Shipment of Specimens	A. Andouche	Museum National d'Histoire Naturelle, France	Invertebrates: Soft Corals

Purpose	Name	Institute	Taxonomic group
Shipment of Specimens	C-f. Dai	Institute of Oceanography, Taiwan	Invertebrates: Soft Corals
Shipment of Specimens	Y. Benayahu	National Museum of Natural History, Leiden, Netherlands	Invertebrates: Soft Corals
Shipment of Specimens	L. van Ofwegen	National Museum of Natural History, Leiden, Netherlands	Invertebrates: Soft Corals
Shipment of Specimens	F.Monniot	Museum National d'Histoire Naturelle, France	Invertebrates: Tunicates
Shipment of Specimens	R. van Soest	Zoological Museum, University of Amsterdam	Invertebrates: Sponges
Shipment of Specimens	J.-P. Legrand	France	Entomology
Shipment of Specimens	K. Nadein	Universitetskaya nab, Russia	Entomology
Shipment of Specimens	Ho-Yeon Han	Yonsei University, Korea	Entomology
Shipment of Specimens	O. Lonsdale	University of Guelph, Canada	Entomology
Shipment of Specimens	B. C. Schlick-Steiner and F. M. Steiner	Universitaet fuer Bodenkultur, Austria	Entomology
Shipment of Specimens	A. Tinaut	Facultad de Ciencias, Spain	Entomology
Shipment of Specimens	P. Brandmayr,	Universita della Calabria, Italy	Entomology
Shipment of Specimens	R. Fabbri	Museo Civico di Storia Naturale Via De' Pisis, Italy	Entomology
Shipment of Specimens	D. K. McAlpine	Australian Museum, Australia	Entomology
Shipment of Specimens	P. Chandler	England	Entomology
Shipment of Specimens	J. Pelletier	France	Entomology

Purpose	Name	Institute	Taxonomic group
Shipment of Specimens	W. N. Mathis	Smithsonian Institution, Washington,, USA	Entomology
Shipment of Specimens	O. Karlsholt	Zoological Museum, Denmark	Entomology
Shipment of Specimens	L. Voronyanskogo	Belarus	Entomology
Shipment of Specimens	M. Fibiger	Denmark	Entomology
Shipment of Specimens	M. Gates	Smithsonian Institution, Washington,, USA	Entomology
Shipment of Specimens	W. Speidel	Zoologisches Forschungsinstitut und Museum, Germany	Entomology
Shipment of Specimens	P. Oosterbroek	Universiteit van Amsterdam Zoölogisch Museum, Netherlands	Entomology
Shipment of Specimens	B. R. Stuckenberg	Natal Museum, South Africa	Entomology
Shipment of Specimens	A. Emeljanov	Universitetskaya nab, Russia	Entomology
Shipment of Specimens	L. Ronkay	Hungary	Entomology
Shipment of Specimens	R. zur Strassen	Forschungsinstitut Senckenberg Entomologie, Germany	Entomology
Shipment of Specimens	C. Bystrowski	Forest Research Institute, Poland	Entomology
Shipment of Specimens	K. S. Nicolaus	Copernicus University Institute of Ecology and Environmental Protection, Poland	Entomology
Shipment of Specimens	M.A. Ashraf	Plant Protection Research Institute, Egypt	Entomology
Shipment of Specimens	B. Pakyürek	Üniveritesi Fen-Edebiyat, Turkey	Entomology
Shipment of Specimens	Y. G. Arzanov	Russia	Entomology
Shipment of Specimens	D. W. Dunckerstr	Germany	Entomology

Purpose	Name	Institute	Taxonomic group
Shipment of Specimens	A. H. Kirk-Spriggs	Albany Museum, South Africa	Entomology
Shipment of Specimens	Y. Dorchin	Israel	Entomology
Shipment of Specimens	M. Langer	Germany	Entomology
Shipment of Specimens	M. Ebejer	England	Entomology
Shipment of Specimens	I. MacGowan	Scottish Natural Heritage Battleby, Scotland	Entomology
Shipment of Specimens	B. Merz	Muséum d'histoire naturelle, Switzerland	Entomology
Shipment of Specimens	G. Alziar	Muséum d'Histoire Naturelle, France	Entomology
Shipment of Specimens	K. Schön	Czach Republic	Entomology
Shipment of Specimens	S. Ziani	Italy	Entomology
Shipment of Specimens	A. Velázquez	Spain	Entomology
Shipment of Specimens	M. Kovacic	Natural History Museum Rijeka, Ceoatia	Fishes
Shipment of Specimens	R. Winterbottom	Department of Natural History, Canada	Fishes
Shipment of Specimens	J. Freyof	Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany	Fishes
Shipment of Specimens	C. Almada	Unidade de Investigacao em Eco-Etologia, Portugal	Fishes
Shipment of Specimens	J. E. Randall	The state museum of natural and cultural history, Hawaii	Fishes
Shipment of Specimens		J.L.B. Smith Institute, South Africa	Fishes