Israel National Report to the Global Taxonomy Initiative (GTI)

Introduction

Awareness for conservation of the biodiversity in Israel is very high. As in the past, organisms for nature protection - Israel Nature and Parks Authority (INPA) and the Society for Preservation of Nature in Israel (SPNI) are as active as ever. During the recent years the Ministry of Environment has been also very active in biodiversity protection.
The two main difficulties encountered, besides the political situation and the recent budget shortages, are resulting from the fact that there is no central National Museum of Natural History and that the number of active taxonomists and of positions for younger taxonomists is dwindling. The two main taxonomic repositories are at the Hebrew University in Jerusalem(HUJ) and at the Tel-Aviv University (TAU) and both are budgeted only indirectly through the Budgeting Committee of the Council of Higher Education. There were in Israel 104 active taxonomists in a last census in 1985. This number has dwindled to a mere 60 .Included in this number also the very few new appointments.

The Israel Academy of Sciences and Humanities

The Academy has in the past (1980-1990s) coordinated between the scientific collections at the universities a funded a council of the "National Collections of Natural History". This council has been deactivated because of budgetary problems. The Academy nonetheless has continued its active involvement and in 1998 published a study document on the needs of the biological collections in Israel.. In sequence, the Academy singled-out biodiversity studies as the National Priority in the field of sciences. Based on the work in which the two collection-owning universities were involved, a special committee of the Academy submitted in 2002 a project to the Budgeting Committee of Higher Education . This project calls specifically on the creation of chairs for systematics and scientific curatorship at the two universities. The project has been recently approved (May 2004) . Its immediate meaning is more than doubling the operational budgets of the collections and the possibility to hire academic curatorial staff on basis of a matching from the Universities of Jerusalem and Tel-Aviv, as requested by the Academy. .

The Academy has continued to finance the activity and the publications of the "Fauna et Flora Palaestina Committee" . The new volumes published by this committee, are monographs on the Mammalia, the Bryophyta and the Amphipoda Hyperiidea of Israel. Several projects are in preparation, namely on the Cyanobacteria, the Rhodophyceae, and the Chilopoda. An updating of the "Flora Palaestina" is also being planned.

The Academy has also financed study visits by foreign scientists. From this resulted a monograph on the Salticidae (Araneae) published in Poland and a volume on the "Soil Fauna of Israel" published by the Romanian Academy.

The National Collections

As mentioned, these collections are curated by the two universities (Jerusalem and Tel Aviv). Since the process of unifying and defining National Collections has been discontinued (see above) , the situation at present is as follows:
* National Collections at HUJ: The National Herbarium, Parasitology , Arachnology , Malacology , Palaeontology
* National Collections at TAU : The National Collections of Entomology , of Aves and of Mammalia.

In the following fields, there are parallel collections at both universities, HUJ and TAU: Aquatic Invertebrates, Ichthyology and Herpetology.
At both universities , the preparation of computer-based catalogues is in progress, though far from being completed.
In addition, a "Collection of Near Eastern seeds and fruits" is maintained by the Bar Ilan University in Ramat Gan and a "Collection of Medicinal Plants" at the Hebrew University.

Collections at the Haifa University (HAI).

In recent years this university has established an " International Center for Cryptogamic Plants and Fungi " which maintains among others a culture collection of fungi. The Center is being operated by a group of young and new immigrant scientists and has especially close cooperation with scientists in Russia and in the Ukraine . The Center publishes a series of books "Biodiversity of Cranoprocaryota, Algae and Fungi of Israel".

The Israel Gene Bank .

This Bank is jointly operated by the Ministry of Agriculture and the Ministry of Sciences and Arts, and mainly located at the Volcani Institute for Agricultural Research in Bet Dagan. The Gene bank has a wide net of bi-partite and regional cooperation in the framework of MERC (Middle East Program in Regional Cooperation) UPOV (Union for the Protection of New Varieties of Plants), AVRDC (Asian Vegetation Research and Development Center), etc.

In addition, the Institute of Evolution (HAI), maintains a " Wild Cereals Gene Bank" .

BioGIS , the Israel Biodiversity Information System

BioGIS, developed at HUJ, is now jointly operated by this university, by TAU and by INPA. It is based on GIS technology and the biological information existing in the National Collections.
The main goal of BioGIS started in 2000, is to integrate the information available on the composition and geographical distribution of the flora and fauna of Israel in a unified Geographical Information System (GIS) that will be open to the public, accessible through the Internet, and equipped with user-friendly, state-of-the-art tools for data analysis and visualization.

By now the data for over 2700 vascular plant species and over 100 terrestrial mollusk species have been included and worked-out and are available for the users.
Recently a project has been started to integrate the taxonomic knowledge of the rain pool ecosystems of Israel, a highly endangered environment.

A Symposium Biodiversity and on Ways to Protect it

A very successful country-wide symposium on this subject was held at TAU in July 2002 sponsored inter alia by the Israel Academy, SPNI, INPA, the Israel Committee for UNESCO and the various relevant ministries.
Among the more than 20 presentations , the guest presentation by Prof. Daniel Simberloff has to be emphasized.

A Symposium on Israeli Archeology and Paleoecology

An International Workshop was organized in 2003 by the Institute of Archeology (HUJ) (Prof. Naama Goren-Inbar) on the paleoecology of the "Levantine Passageway" , with special emphasis on the 980 ka old Gesher Benot Yaaqov site. Collection-based botanists fro Bar Ilan University and aquatic zoologists from the Hebrew University took part. The proceedings are being published in a book edited by Prof.John Speth

Scientific Societies and Journals.

The Israel Society of Zoology is routinely holding its yearly meetings. The last one, in December 2003 was held at the Institute of Desert Researches in Sede Boqer. The meetings of the Society supply a forum for thesis presentations and the bureau of the Society distributes prices to the best MSc and PhD lectures.. The Proceedings of the Annual Meetings are being regularly published by the Israel Journal of Zoology.

The Society of Zoology has actively contributed to the organization and supported the XVIIIth International Congress of Zoology in Athens (2000),

The Israel Society of Botanics and the Israel Society of Microbiology have also their regular meetings.
The "Israel Journal of Zoology" and the "Israel Journal of Plant Sciences" are being published regularly with some 200 pages per yearly volume, usually in four fascicles. The two journals are increasingly turning into regional media for contributions from Israel, Greece, Turkey and Jordan.
The journals are publishing also symposia or memorial volumes, like for example on " The Levant as a Biogeographic Bridge - Land, Sea and Air" (Israel Journal of Zoology, 1999) or the memorial volume dedicated to the late Prof.Clara Heyn (Israel Journal of Plant Sciences, 2002).
The collections at the Hebrew University, recently published a second issue of their newsletter "Haasiana" , which contains updated information on the collections, the different research projects and the collection-based publications of the last few years.

Some Main Research Projects.

- Research on Lessepsian Migration. Scientists from the National Oceanographic Institute and from HUJ, based on the existing collections, are actively involved in monitoring this immigration process and

participated as authors in the "Atlases of Exotic Species in the Mediterranean Sea" published recently by CIESM (Mediterranean Research Council")in Monaco.

- Updated distributional maps of species of flowering plants, HUJ in collaboration with Jordan.

- Two collecting expeditions to the Seychelles Islands organized by the Inter-University Marine Institute in Eilat resulted in large collections of corals, fish and other tropical marine material which has been distributed to the participant scientists and institutions.

- Monitoring of the aquatic invertebrate fauna of the Hula valley northern Israel., especially after the partial re-flooding of the old lake Hula area in 1997 (HUJ) . This project resulted among others, in the re-discovery of several species which were considered previously as extinguished after the drainage of the old lake in 1958

- The study of the biota of the "Evolution Canyon" on Mt.Carmel (HAI) , resulted in publications on many taxa of terrestrial invertebrates, including insects, that were never studied before in Israel.

- The "Rotem Project" by HUJ in collaboration with SPNI and INPA, develops and maintains a collection and a data bank of the flowering plants of Israel and of their pollinators.

Presented by Prof. Francis Dov Por
- National Representative –

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