

# Curriculum vitae

**Yossi Loya**

**Professor of Marine Biology**

**Raynor Chair for Environmental conservation Research**

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## Lab

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## Home

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## **CURRICULUM VITAE**

*Date of birth:* .....23 May, 1942

*Place of birth:* .....Plovdiv, Bulgaria

*Year of immigration:*.....1944

*Zahal, Military Service:* ..... 1960-1962

*Marital Status:* .....Married to Shoshana Loya

Children: Yael, Shay and Assaf

### **A. EDUCATION**

<b>Year</b>	<b>University/ Institute</b>	<b>Department</b>	<b>Degree</b>
<b>1962-1965</b>	Tel Aviv University, Israel	Biology	<b>B.Sc.</b>
<b>1965-1967</b>	Tel Aviv University, Israel	Zoology	<b>M.Sc.</b>
<b>1967-1971</b>	State University of New York at Stony Brook, L.I. New York	Ecology	<b>Ph.D.</b>
<b><u>M.Sc. Thesis:</u></b>	Ecology of fish breeding in brackish water ponds near the Dead Sea (Israel).		
<b><u>Ph.D. Thesis:</u></b>	Community structure and species diversity of hermatypic corals at Eilat, Red Sea. <u>Supervisor:</u> Prof. L.B. Slobodkin		
<b><u>Post doctorate</u></b> <b>1971-1972</b>	Woods Hole Oceanographic Institution, Mass. <u>Research:</u> Oil pollution effects on benthic communities in Buzzards Bay Woods Hole- (with Professors H. Sanders and F. Grassle)		

### **B. AREAS OF SCIENTIFIC INTEREST**

Ecology and Evolution of reef corals; Coral reef community structure; Species diversity of corals; Life history strategies of reef corals and their associated fauna; Coral bleaching; Coral diseases; Competitive networks and space partitioning within coral populations; The role of boring organisms in bioerosion of coral reefs; Effects of natural and anthropogenic disturbances on coral reef communities; Effects of oil-pollution on coral- reef communities; Conservation ecology and management of coral reef nature reserves; hormonal influences on anthozoan reproductive cycles, effects of environmental stress on anthozoan reproduction; Biologically active compounds derived from coral-reef organisms in search for new drugs; Global climatic changes and its effect on coral-reef communities;

### **C. ACADEMIC AND PROFESSIONAL EXPERIENCE**

<b>Year</b>	<b>University/Institute</b>	<b>Department</b>	<b>Title</b>
1962-1965	Tel Aviv University	Biology	<b>B.Sc.</b>
1965-1967	Tel Aviv University	Zoology	<b>M.Sc.</b>
1968-1971	State University of New York at Stony Brook, L.I., N.Y.	Ecology & Evolution	<b>Ph.D.</b>
1971-1972	Woods Hole Oceanographic Institute, Woods Hole, Mass.	Marine Ecology	<b>Post-doctorate</b>
1972-1976	Tel Aviv University	Zoology	<b>Lecturer</b>
1976-1980	Tel Aviv University	Zoology	<b>Senior lecturer</b>
1980-1986	Tel Aviv University	Zoology	<b>Associate Professor</b>
1986-present	Tel Aviv University	Zoology	<b>Full Professor</b>
1988-1989	Tel Aviv University	Zoology	<b>Chairman</b>
1990-1995	Tel Aviv University	Faculty of Life Sciences	<b>Dean</b>
1979-1980	Australian Institute of Marine Sciences (AIMS) and James Cook University, Australia	Marine Ecology	<b>Visiting Professor (Senior Queen Elizabeth Fellow)</b>
1982-1985	“Coral Reefs” Journal Springer-Verlag	Biology	<b>Chief Editor (Biology section)</b>
1985-1986	Scripps Inst. of Oceanography La Jolla, San Diego USA	Ecology	<b>Visiting Professor</b>
1995,97,99,03 (summers)	University of the Ryukyus, Okinawa, Japan	Sesoko Tropical Biosphere Research. Center	<b>Visiting Professor</b>
1995-2000	The Porter Super-Center for Ecological and Environmental Studies, Tel Aviv University	Ecology	<b>Director</b>
1997-present	The Raynor Chair for Environmental Conservation Research, Tel Aviv University	Environmental Conservation	<b>Chair</b>

## **D. INTERNATIONAL COMMITTEES- ADVISORY AND ADMINISTRATIVE DUTIES**

- 1971-1973      **Member- Scientific Committee on Oceanic Research (SCOR, UNESCO),**  
Working group on: "Quantitative studies on coral reefs"
- 1977-1979      **Chairman- The Zoological Society of Israel.**
- 1979-present   **Member- Editorial board of the journals:**  
*Marine Ecology Progress Series (79-84); Coral Reefs (82-85)*  
*Marine Biology (86-90); Marine pollution Bulletin (2002-present)*
- 1986-2000      **Advisor- Israel National Academy of Science Foundation.**
- 1978-1990;  
2000-present   **Member- Scientific advisory board Nature Protection Authority, Israel**
- 1978-1992      **Member- International Association of Biological Oceanography (IABO)**  
**Scientific international committee of the following coral reef symposia:**  
-3<sup>d</sup> International Symposium on Coral Reefs: Miami, Florida, 1977;  
-4<sup>th</sup> International Symposium on Coral Reefs: Philippines, May 1981;  
-5<sup>th</sup> International Symposium on Coral Reefs: Tahiti, June 1985;  
-6<sup>th</sup> International Symposium on Coral Reefs: Australia, August 1988;  
-7<sup>th</sup> International Symposium on Coral Reefs: Guam, June 1992.
- 1982-1992      **Council Member - International Society for Reef Studies (ISRS).**
- 1982-1985      **Editor-in-Chief - "Coral Reefs", (Biology Section) Springer-Verlag.**
- 1986-1992      **Member- The Scientific Review Board, Oil Spill Project-**  
**Smithsonian Tropical Research Institute (STRI, Panama)**
- 1992            **Head- The Israeli Scientific Delegation to the UN Conference on**  
Environmental Development (UNCED) Rio-de Janeiro, Brazil.
- 1993-2000      **Chairman- Israeli Man and the Biosphere (MAB)- Committee, UNESCO**
- 1996-1999      **Advisor Israeli Ministry of Science (Germany-Israel Marine Biology Program).**
- 1997-1999      **Advisor- Israel Science Foundation (Ecology committee)**
- 1996-1999      **Chairman- The Board of Directors, Inter-University Institute**  
**of Marine Science (IUI), Eilat.**
- 2000-present   **Member- The Board of Directors, IUI, Eilat**
- 1989-1990      **Chairman Department of Zoology, Tel Aviv University**
- 1990-1995      **Dean - Faculty of Life Sciences, Tel Aviv University**
- 1990-1995      **Member- University Central Committee, Tel Aviv University**
- 1990-1995      **Member- Board of Governors, Tel Aviv University**
- 1990-2002      **Member- Board of Trustees, Tel Aviv University**
- 2000-2004      **Member- Academic Planning Committee, Tel Aviv University**
- !2004-present   **Member- Central Nomination Committee, Tel Aviv University**

## PRIZES

### **The Darwin Medal (Year 2000) :**

Awarded by the **International Society for Coral Reef Studies (ISRS)**, during the 9<sup>th</sup> International coral Reef Symposium Bali, Indonesia, **for life contribution to coral reef research;** (Medal awarded every 4 years).

### **The Landau Prize (2003)**

Awarded, **together with Prof. Eugene. Rosenberg, TAU**, by Mifaal Hapais in the category of **Life Sciences** for **original outstanding research contribution to the field of Ecology and Environmental Quality.**

## F. AWARDS

- 1973      **NOAA - Manned Undersea Science and Technology Program:**  
“External distribution of energy fixed by reef corals at Puerto-Rico”.  
Two weeks underwater expedition using underwater laboratory-PRINUL  
(in collaboration with Professors. S. Richman and Dr. L. McCloskey).
- 1974      **National Council for Research and Development:**  
“The effect of pollutants on coral reef communities”.
- 1974-1976      **U.S.-Israel Bi-National Science Foundation:(BSF):**  
“Growth and development of reef corals.”
- 1975-1976      **National Council for Research and Development:**  
“Experiments on the effect of oil pollution on hermatypic corals”.
- 1976-1979      **Ministry for Commerce and Industry:**  
“Biologically active products from marine organisms”.  
(in collaboration with Prof. Y. Kashman, Tel- Aviv University).
- 1979-1980      **Senior Queen Elizabeth Fellowship:**  
Australian Institute of Marine Science, Cape Ferguson, Australia.
- 1980-1983      **Israeli Academy of Sciences- Basic Research Foundation:**  
“The variation in the chemical composition of soft-corals and sponges as a  
function of the place of collection”. (in collaboration with Prof. Y. Kashman,  
TAU).
- 1980-1983      **U.S.-Israel Bi-national Science Foundation (BSF):**  
“Isolation and identification of New Marine Natural Products”.  
(in collaboration with Prof. Y. Kashman, TAU).
- 1984-1985      **The Fund for Basic Research, Tel Aviv University:**  
“Ecology of boring bivalves in living stony corals”.

- 1984-1987 **The Society for Nature Protection:** “Massive predation of scleractinian corals at Eilat caused by a predatory gastropod”.
- 1984-1987 **Israeli Academy of Sciences- Basic Research Foundation:** “Reproductive strategies of Red Sea scleractinian corals”.
- 1986-1989 **U.S.-Israel Bi-national Science Foundation (BSF):** “Larval ecology of boring bivalves in living corals”.
- 1988-1990 **Harbor Branch Oceanographic Institution, Sea Pharm Project:** “Bioactive materials derived from soft corals and sponges from the Red Sea”. (in collaboration with Prof. Y. Kashman, TAU).
- 1989-1992 **National Council for Research and Development - Joint German-Israeli Program:** “A new method to assess indicators of environmental stress and possible stabilization or degradation of toxicants in coral reefs”.
- 1990-1992 **FAO Mediterranean Action Plan (MED POL) –** “Swarming of jellyfish along the Mediterranean Coast of Israel: An environmental approach”.
- 1990-1993 **National Coal Company:** “Effects of coal pollution on coral reefs”.
- 1991-1994 **Office of Environmental Quality:** “Medusa blooms in the Mediterranean Sea: Ecological aspects”.
- 1991-1995 **US National Institute of Health (NIH):** “Novel natural products from the sea as potential anti-AIDS drugs”. (in collaboration with Prof. Y. Kashman, School of Chemistry and Prof. A. Hizi, Medical School, TAU).
- 1992-1995 **Israel Academy of Sciences-Basic Research Foundation:** “Bioerosion of coral reefs by sponges, sea-urchins and bivalves”.
- 1993-1996 **The German-Israeli Foundation for Scientific Research and Development (G.I.F.):** “Patterns of stable isotope fractionation during mineralization processes in corals: environmental implications”.
- 1996-1999 **Israel Science Foundation (ISF):** “Bioerosion of coral reefs a multidisciplinary approach”. (in collaboration with B. Lazar, the Hebrew University)
- 1996-1999 **U.S.-Israel Bi-National Science Foundation (BSF):** “Coral bleaching by bacteria”. (In collaboration with E. Rosenberg, TAU).
- 1995-1999 **The German Ministry of Education, Science, Research and Technology (B.M.B.F.): - Red Sea Program-** “Scleractinian corals as environmental recorders of the Red Sea”.
- 1998-2002 **Israeli Ministry of Science:** (in collaboration with M. Ilan, TAU). Novel Bioactive Compounds from Marine Invertebrates and their symbionts

- 1998-2002 **Ministry of Science:** “Establishment of a National Infrastructure Laboratory: **Center for High Israeli Throughput Screening (HTS) for Novel Bioactive Compounds** at Tel Aviv University”-(**Director and Coordinator of a research project** involving 22 scientists from 6 academic and research institutions in Israel).
- 1999-2003 **MERC-Bi-National Research and Monitoring Program (Israel -Jordan) for the Red Sea Marine Peace Park, Aqaba, Jordan** (heading the monitoring program of “community structure of stony corals at the Coral Nature Reserve”
- 2002-2006 **Israel Science Foundation (ISF):**  
“Alternative feeding mechanism in corals: bacterial aggregate “gardening”  
(Co-PI in collaboration with A. Kushmaro, Ben Gurion Univ.)
- 2004-2006 **Marie Curie European Research Training Network** (with M. Ilan, TAU)
- 2005-2010 **GEF/The World Bank/UNESCO/IOC:** International Targeted Working Group of Experts on "indicators of coral bleaching". **Co-Chairman** with Professor Ove Hoegh Guldberg (Chairman) of the group, including 14 scientists from USA, England, Australia, Kenya, Israel, and Mexico. The group meets annually and works together for 2-3 weeks at 4 reef sites: Heron Island (Great Barrier Reef, Australia), Puerto Morelos (Mexico), Philippines and Zanzibar.
- 2003-2007 **Israel Science Foundation (ISF)-**  
“An integrative approach of studying bacterial coral bleaching in the coral reef of Eilat”. (PI in collaboration with E. Rosenberg, TAU).
- 2004 -2006 **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)  
PI in collaboration with Y. Benayahu and A. Abelson).
- 2004-2008 **Israel Science Foundation (ISF)-**  
The isotopic composition of Eilat's corals: basic aspects of signals buildup and tracing anthropogenic stress.  
(Co-PI in collaboration with A. Shemesh, the Weizman Institute

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## ***G. MEMBERSHIP IN PROFESSIONAL SOCIETIES***

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Ecological Society of Israel  
Zoological Society of Israel  
Ecological Society of America  
International Society for Reef Studies

## H. SUPERVISION OF GRADUATE STUDENTS

### Ph.D. students

<i>Year of graduation</i>	<i>Name</i>	<i>Thesis title</i>
1982	Yehuda Benayahu	Population dynamics and life history strategies in Red Sea soft corals
1982	Baruch Rinkevich	Calcification and productivity in the scleractinian coral <i>Stylophora pistillata</i>
1984	Avi Shafir	Aspects of energy flow within the coral <i>Stylophora pistillata</i> and some of its associates
1984	Yechiam Schlesinger	Reproduction and juvenile growth in stony corals
1988	Craig Browdy	Growth and reproduction of the shrimp <i>Penaeus semisulcatus</i> in captivity
1989	Micha Ilan	Life strategies of sponges from the Red Sea: Reproduction, settlement and self/non-self recognition
1993	Avigdor Abelson	Biomechanical aspects in the biology and ecology of sessile organisms in coral reefs
1993	Ofer Mokady	Bioerosion rate of corals by boring bivalves: A chemical approach
1994	Ramy Klein	Skeletal banding in recent and fossil corals.
1995	Amit Lotan	Medusae blooms in the Mediterranean Sea: Ecological and toxicological aspects
1998	Uri Oren	Regeneration patterns in reef corals.
1998	Ariel Kushmaro	Interactions between corals and their associated bacteria. (Co-Supervisor: Prof. Eugene Rosenberg )
2002	Maoz Fine	Community structure and dynamics of Mediterranean corals.
2003	Michael Rosenfeld	The use of contemporary corals in predictive models concerned with global climate change



<b>2003</b>	<b>Dov Kelman</b>	Biologically active materials derived from Red Sea organisms
<b>2003</b>	<b>Omer Choresh</b>	Expression of heat shock proteins (HSPs) in marine invertebrates: development of an early warning system for disturbed marine environments
<b>Current</b>	<b>Gidon Winters</b>	Photoinhibition in corals – effects of UV, PAR and temperature. (Co-supervisor- S. Beer).
<b>Current</b>	<b>Noa Shenkar</b>	Population dynamics of Mediterranean and Red Sea tunicates.
<b>Current</b>	<b>Assaf Zevoluni</b>	Coral community dynamics in bleached and non-bleached coral reefs (Zanzibar vs. Eilat)
<b>Current</b>	<b>Amy Shlesinger</b>	Predator-prey interactions between nudibranchs and their sea-anemone prey
<b>Current</b>	<b>Rachel Armosa</b>	Ecological and physiological aspects of sex hormones in corals

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### *M.Sc. students*

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*Year of*

*graduation Name*

*Thesis title*

<b>1975</b>	<b>Yehuda Benayahu</b>	Quantitative characteristics of stony corals, soft corals and algae in the northern Gulf of Eilat (Red Sea).
<b>1975</b>	<b>Baruch Rinkevich</b>	On the reproduction of <i>Stylophora pistillata</i> (Esper) and harmful effects of oil pollution on its population.
<b>1978</b>	<b>Yechiam Schlesinger</b>	Effects of phosphate pollution on the community structure of the holothurians <i>Actinopyga bannwarthi</i> and <i>Synapta maculata</i>
<b>1978</b>	<b>Mordehai Shpigel</b>	Spatial heterogeneity in branching corals and fish species diversity
<b>1979</b>	<b>Zeev Wolodarsky</b>	Competition and space partitioning among <i>Trapezia</i> species within the coral <i>Stylophora pistillata</i> .
<b>1985</b>	<b>Esther Kramarsky-Winter</b>	Life history strategy of the bivalve <i>Lithophaga purpurea</i> boring in the coral <i>Cyphastrea chalcidicum</i> .

- 1985**      **Itzhak Brikner**      Reproductive and settlement strategy of the boring bivalve *Lithophaga purpurea* in living corals.
- 1987**      **Avigdor Abelson**      Aggressiveness in stony corals: Is it competition for space?
- 1988**      **Oved Gur**      Predation and life history strategies of the coral predatory snail *Drupella cornus*
- 1988**      **Sara Sadot**      Life history and reproduction of *Pocillopora* in the Gulf of Eilat.
- 1989**      **Rami Klein**      Sclerochronological aspects of hermatypic corals (genus: *Porites*) in the Gulf of Eilat
- 1989**      **Gila Arazi**      Larval ecology of boring bivalves in living corals.
- 1990**      **Oron Prager**      Surface structural complexity and its influence on ecological indices of aquatic communities.
- 1991**      **Tamar Liberman**      Possible benefits to the coral *Stylophora pistillata* from the association with the fish *Dascyllus marginatus*
- 1991**      **Nadav Shashar**      Nitrogen fixation in stony corals.
- 1996**      **Vered Shimoni**      Population genetics of boring bivalves in stony corals.
- 1997**      **Dalit Trovezky**      Bioerosion of the coral reef by parrotfish (Co-supervisor: Dr. B. Lazar, Hebrew University).
- 1998**      **Maoz Fine**      The scleractinian coral *Oculina patagonica*: A new invader to the Mediterranean sea, biological and ecological aspects.
- 1998**      **Hadas Lubinevsky**      Light and shade adapted Mediterranean corals
- 1999**      **Omer Choresh**      Heat shock proteins in *Oculina patagonica*: a Mediterranean shallow water coral.
- 2000**      **Nachshon Siboni**      Effect of coal pollution on Mediterranean benthic communities.
- 2001**      **Gidon Winters**      Photoinhibition in shallow water colonies of *Stylophora pistillata* as measured in situ. (Co-supervisor Sven Beer)
- 2003**      **Noa Levin**      Environmental factors influencing the chronic bleaching of the Mediterranean stony coral *Oculina patagonica*.
- 2003**      **Meir Sussman**      Fluorescent *in situ* Hybridization (FISH) reveals the fireworm *Hermodice carunculata* as a reservoir and a

		possible vector for the coral pathogen <i>Vibrio shiloi</i> (Co-supervisor- E. Rosenberg).
2003	Ofer Ben-Zvi	Deterioration Index (DI): a suggested tool for monitoring reef-coral community health. (Co-supervisor- A. Abelson).
2003	Omer Polack	Reproductive cycle of <i>Palythoa</i> sp. at Eilat, Red Sea (Co-supervisor- Y. Benayahu).
2004	Amy Shlesinger	Nematocysts' toxins of the Mediterranean sea-anemone <i>Aiptasia diaphana</i> and their role in external digestion.
2005	Ran Sulam	Outbreak of coral diseases at the coral reefs of Eilat.
2005	Rachel Armoza	Bio-indicators of stress in scleractinian corals.
2006	Roe Segal	Molecular characteristics of the bleaching phenomenon of the Mediterranean stony coral <i>Oculina patagonica</i> .
2006	Yehonatan Sharon	Ecology of Lessepsian mussels invading the Mediterranean (Co-supervisor- Y. Benayahu TAU)
2006	Daniel Allen	Community structure of deep (50 m) scleractinian corals in Eilat, Red Sea.
Current	Nimrod Lazarus	Induction of metamorphosis in nudibranch larvae.
Current	Ada Alamaro	Ecological and cellular aspects of color morphs in the coral <i>Stylophora pistillata</i> . (Co-supervisor- D. Chernov, Hebrew Uni. and IUI).
Current	Ido Mizrahi	Sclerochronology of bleached and non-bleached corals. (Co-supervisor- A. Shemesh, Weitzman Institute).
Current	Maya Weizel	Bleaching effects on reproduction of a Red Sea scleractinian coral population.
Current	Rafi Yaabetz	Reproductive cycle of a nudibranch.
Current	Ayelet Dadon	Mechanisms of bleaching in the Mediterranean coral <i>Oculina patagonica</i> (Co-supervisor- M. Fine, Bar Ilan Univ.).

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## ***I. ACTIVE PARTICIPATION IN SCIENTIFIC MEETINGS***

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- 1970 Symposium of Regional Variation of Indian Ocean Coral Reefs. The Royal Society and Zoological Society of London, London.  
Invited lecture: Coral community structure at Eilat, Red Sea.
- 1971 The Penrose Conference on Marine Ecology and Pale ecology, Monterey, California.  
Lecture: Community structure and species diversity of hermatypic corals.
- 1973 Second International Symposium on Coral Reefs, The Great Barrier Reef, Australia.  
Plenary lecture: On the possible use of plotless methods for quantitative studies of benthic communities of coral reefs.
- 1976 Third International Symposium on Coelenterate Biology, Victoria, B.C., Canada.  
Lecture: Settlement, mortality and recruitment in a Red Sea scleractinian coral population.
- 1976 International Helgoland Symposium: Ecosystem Research. Biologische Anstalt Helgoland - Helgoland, Germany F.R.  
Invited lecture: Quantitative characteristics of community structure of stony corals, soft corals and algae in the northern Gulf of Eilat, Red Sea.
- 1977 Third International Coral Reef Symposium, Univ. of Miami, Florida.  
Lectures:  
1. Seasonal occurrence of benthic-algae communities and grazing regulation by sea-urchins at the coral reefs of Eilat, Red Sea.  
2. Harmful effects of chronic oil pollution on a Red Sea scleractinian coral population.
- 1978 Tenth International Congress of Sedimentology, Jerusalem.  
Field leader: "Pleistocene and Recent coral reefs and coastal sedimentation in the Gulf of Eilat".
- 1978 Second International Congress of Ecology, Jerusalem.
- 1979 Australian Institute of Marine Science (AIMS) Workshop on Coral Reefs; Cape Ferguson, Townsville, Australia  
Lecture: Life history strategy of a Red Sea coral population.
- 1980 UNESCO workshop on Marine and Coastal Processes in the Pacific: Ecological aspects of coastal zone management; Mutupore Island Research Centre, Port Moresby, Papua New Guinea  
Panel leader: Degradation of the environment.
- 1980 Second International Symposium on Biology and Management of Mangroves and Tropical Shallow Water Communities. The Western Society of Naturalists and the University of Papua New Guinea. Port Moresby, Madang, Papua New Guinea.  
Plenary lecture: Competition for space among coral reef sessile organisms.

- 1981 Fourth International Coral Reef Symposium, Manila, Philippines.  
Lecture: Life history strategies of boring bivalves in corals
- 1981 U.S. National Academy of Sciences - Update workshop on: "Oil in the sea: Inputs, Fates and Effects". Invited referee in the section of Effects of Petroleum Hydrocarbons on Coral Reefs. Clearwater, Florida, USA.
- 1982 International Conference on Marine Science in the Red Sea. Al-Ghardaqa Marine Biological Station, Egypt.  
Lecture: Seasonal changes in growth rates of a Red Sea coral population.
- 1982 Workshop on Evolution and Maintenance of Modern Coral Distributions. Australian Institute of Marine Science, Townsville, Australia.  
Invited lecture: Reproductive cycle of *Stylophora pistillata* in the Great Barrier Reef and the Red Sea.
- 1983 Great Barrier Reef Conference. James Cook University and the Australian Institute of Marine Science (AIMS), Townsville, Australia.  
Plenary lecture: Community structure and life history strategies of scleractinian corals.
- 1983 International Helgoland Symposium: "Diseases of Marine Organisms". Biologisch Anstalt Helgoland, Helgoland, Germany F.R.  
Invited lecture: Tumor formations in scleractinian corals.
- 1983 Second Conference of the International Society of Reef Studies, Nice, France.  
Plenary lecture: Reproductive patterns of Red Sea corals.
- 1985 Fifth International Coral Reef Congress, Tahiti.  
Invited lecture: Seasonal changes in growth rate of a Red Sea coral population.
- 1985 Western Society of Naturalists Annual Meeting, Monterey, USA.  
Lecture: Sexual reproduction in reef corals: Red Sea versus the Great Barrier Reef.
- 1986 The Woods Hole Research Center: Conference on Biotic Impoverishment, Woods Hole, USA.  
Plenary lecture: Changes in a Red Sea coral community under chronic oil pollution: A long-term case history study.
- 1987 Twenty-second European Marine Biology Symposium, Barcelona, Spain.  
Plenary lecture: Pollution effects of coral reef communities.
- 1987 Workshop on oil pollution effects on the coral reefs of Panama; Meeting of Scientific Review Board, Phase 1. Smithsonian Tropical Research Institute, Panama.
- 1987 Regional Research Workshop and International Symposium on the Conservation and Management of Coral Reef and Mangrove Ecosystems, Okinawa, Japan.  
Invited lecture: Effects of man-made versus natural disturbances on coral reefs.

- 1988 Sixth International Coral Reef Symposium, Townsville, Australia.  
Lecture: First sclerochronological record of hermatypic corals from the Red Sea.
- 1988 Workshop on the long term assessment of the oil-spill at Bahia Las Minas, Panama. Washington, DC., USA.
- 1989 Fifth International Conference on Coelenterate Biology, Southampton, England.  
Lecture: Larval and postlarval recruitment in the broadcasting scleractinians *Favia fava* and *Platygyra lamellina*.
- 1989 Fifth International Congress of Invertebrate Reproduction, Nagoya, Japan.  
Lecture: Resource allocation between growth and reproduction in corals and boring bivalves.
- 1989 Annual meeting of the International Society for Reef Studies, Marseilles, France.  
Invited lecture: Bioerosion of coral reefs.
- 1989 Workshop on the oil pollution effects on the coral reefs of Panama; Meeting of the Scientific Review Board, Phase 2. Smithsonian Tropical Research Institute, Panama
- 1990 Fifth International Congress of Ecology, Yokohama, Japan.  
Invited lecture: Coral host specificity between the date mussel *Lithophaga lessepsiana* and the coral *Stylophora pistillata*.
- 1991 Workshop on coral bleaching, Coral Reef Ecosystems and Global Climate Change. Miami, Florida.  
Invited lecture: Climate change in Sinai Desert during the late Quaternary inferred from fluorescent bands in fossil corals.
- 1991 Workshop on oil pollution effects on the coral reefs of Panama; Meeting of Scientific Review Board, Phase 3. Smithsonian Tropical Research Institute, Panama.
- 1992 Seventh International Coral Reef Symposium, Guam,  
Lectures: 1. Settlement, metamorphosis and bioerosion rate of the boring bivalve *Lithophaga lessepsiana*.  
2. Depth-dependent timing of density band formation in scleractinian corals at the coral reefs of Eilat, Red Sea, Israel.
- 1992 Status seminar of the German-Israeli Co-operation in Environmental Research; Ploen, Germany.  
Lecture: A new method to assess indicators of environmental stress and possible stabilization of toxicants in the environment.
- 1992 International Symposium on Biodiversity and Adaptive Strategies of Coral Reef Organisms, Okinawa, Japan.  
Plenary lecture: Massive predation of scleractinian corals at Eilat caused by the predatory gastropod *Drupella cornus*.

- 1993 Conference on Middle East Multilateral Talks, UCLA, Los Angeles, USA.  
Invited lecture: Development and protection of the Gulf of Aqaba.
- 1993 Conference on Global Aspects of Coral Reefs: Health, Hazards and History,  
Univ. of Miami, USA.  
Plenary lecture: Long-term changes in coral community structure at Eilat, Red Sea.
- 1995 UNESCO 28th General Meeting:-Scientific Representative of the Israeli  
delegation proposing to declare the Gulf of Aqaba (Eilat) as a Biosphere Reserve.
- 1995 Conference of the Red Sea Program (RSP) on Marine Sciences, Dahab, Egypt.  
Lecture: The use of scleractinian corals as environmental recorders of the Red Sea.
- 1995 International Coral Reef Initiative Workshop; Dumaguete City, Philippines.  
Israeli representative discussing quantitative methods for monitoring coral reefs.
- 1995 18th Pacific Science Congress: Population, Resources and Environment  
Prospects; Beijing, China.  
Lecture: Stony corals as environmental recorders.
- 1996 Eighth International Coral Reef Symposium, Panama City, Panama.  
Lecture: Predation of corals by the predatory snail *Drupella cornus*.
- 1997 Biotic recoveries from mass extinctions; Panel member.  
Academy of Sciences, Prague, Czech Republic
- 1997 Workshop of the Bi-national Research and Monitoring Program (Israel –Jordan)-  
(MERC) for the Red Sea Marine Peace Park:–Discussion Leader. Aqaba, Jordan.
- 1998 Annual meeting of the Society for Integrative and Comparative  
Biology; Boston, USA.  
Lecture: Bleaching of corals caused by bacteria.
- 1998 Meeting of the Red Sea Program of Marine Sciences, Bremen, Germany.  
Lecture: Scleractinian corals as environmental recorders of global change.
- 1998 Hawaii Coral Reef Monitoring Workshop-A Tool for Management; Univ. of Hawaii  
Plenary lecture: The Red Sea Peace Park Coral Reefs Benthic Communities:  
Ecology and Biology Monitoring Program.
- 1998 The Third EuroMab Biosphere Reserves Coordinators' Meeting Ilomantsi, Finland.  
Lecture: The Red Sea Peace Park as a Trans-boundary Marine Biosphere Reserve.
- 1998 Expert workshop on coral bleaching: Convention on Biological Diversity  
Manila, Philippines.  
Invited lecture: Devastating Coral bleaching in Okinawa, Japan.

- 1998 The Third Euro-MAB Biosphere Reserves Coordinators Meeting, Iiomantsi, Finland.  
Lecture: The Red Sea Peace Park as a Trans-boundary Marine Biosphere Reserve.
- 1999 Japan Marine Science and Technology (JAMSTEC) International Coral reef Symposium- Coral reef biodiversity and health as indicators of environmental change, Tokyo, Japan. Invited lecture: Regeneration processes in scleractinian corals.
- 2000 The 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia. Awarded the Darwin Medal (Year 2000) for life time contribution to coral reef research. Plenary lecture: Homage to *Stylophora pistillata*: a significant coral species in reef research.**
- 2001 The World Bank/UNESCO/IOC Workshop on Indicators of Coral Stress, Paris, France. Initiation of the International Working Group of Experts.  
Lecture: Coral bleaching: the winners and the losers
- 2002 The International Society of Reef Studies European Coral Reef Meeting; Cambridge, England  
Lecture: Bleaching of Mediterranean corals is caused by a bacterial pathogen
- 2002 The World Bank/UNESCO/IOC International Targeted Group of Experts on "indicators of coral bleaching". First Field-Workshop of the Working Group; Heron Island, The Great Barrier Reef, Australia.
- 2002 Sixth EU Framework Programme of the European Community for research technological development and demonstration activities; Network of Excellence- Marine Molecular Biotechnology; Brussels, Belgium.  
Invited lecture: Bioactive Compounds from Red Sea Marine Organisms.
- 2002 Workshop on "Biological considerations associated with current geochemical approaches using stony corals as proxies for the reconstruction of different aspects of past climates" Woods Hole Oceanographic Institution, Cape Cod, Mass.  
Invited lecture: "Using stony corals as proxies for the reconstruction of Red Sea past climates".
- 2002 The World Bank/UNESCO/IOC International Targeted Group of Experts on "indicators of coral bleaching".  
Second Field-Workshop of the Working Group, Puerto Morelos, Mexico.
- 2003 International Review Board Meeting of the Coral Bleaching Project. Research Institute of the Subtropics (RIS), Tokyo, Japan.
- 2003 The World Bank/UNESCO/IOC International Working Group on indicators of coral bleaching:- Workshop on Coral Bleaching: Biological Early Warning Systems, Paris, France.
- 2003 Marine Molecular Biotechnology and Biodiversity Meeting; Wendelsheim, Germany.  
Plenary lecture: Biodiversity of the Red Sea coral reefs: A unique source for new



- natural products.
- 2003 Workshop on “Coral Health and Diseases”, Eilat, Israel.  
Invited lecture: The coral reefs of Eilat: 35 years of monitoring their coral community structure
- 2003 The Red Sea Marine Peace Park International Symposium Integration of Marine Science and Resource Management, Aqaba 2-4 December 2003
- 2003 International Coral Ecotoxicology and Health Workshop: Bermuda Biological Station for Research  
Invited lecture: The coral reefs of Eilat -- past, present and future: Three decades of coral community structure studies
- 2004 The 10<sup>th</sup> International Coral Reef Symposium, Okinawa, Japan  
Lecture: How to kill a coral reef?
- 2004 Census of Marine Life (CoML) Coral Reef Initiative Working Group: Quantitative methodologies for assessing coral community bleaching , 14-16 October Washington DC
- 2004 IOC-GEF/World Bank working group on coral bleaching Workshop, 19-22 October, Washington DC
- 2005 The World Bank/ /IOC-GEF International targeted Group of Experts third workshop on indicators of coral bleaching; 8-16 January, Puerto Morelos, Mexico.
- 2005 Ilanit Congress of the Federation of the Israel Societies for Experimental Biology (FISEB ) February 7-10 Eilat.  
Invited Plenary Lecture: The Coral Reefs of Eilat: Three decades of coral community structure studies.
- 2005 Peer Review of the Department of Ecology and Evolutionary Biology, 13-16 April, Ravenna, Italy.
- 2005 World Bank/ UNESCO/IOC-GEF International targeted Group of Experts fourth workshop on indicators of coral bleaching, 10-29 May, Puerto Morelos, Mexico
- 2006 IOC-GEF/World Bank working group on coral bleaching Workshop, 7-11 April, Paris France.
- 2006 ARC Centre of Excellence- first scientific annual board meeting, February 17-20, Townsville, Australia.
- 2006 Palau Coral reef workshop, Koror June 25<sup>th</sup>-July 8<sup>th</sup>.  
Lecture: Fish net pen mariculture and the coral reefs of Eilat: a sad story.
- 2006 ISRS (International Society for Reef Studies) European Meeting Bremen, Germany Sept 19-22  
Lecture: Net pen fish farming and coral reefs: An unhappy marriage.

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**K. LIST OF PUBLICATIONS (Journals)**

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1. Fishelson L. & **Y. Loya** (1968). Preliminary observations on a population of *Gastrosaccus sanctus* (Van Benden) (Mysidacea Gastrosaccinae) on a Mediterranean sand beach of Israel. *Crustaceana* 15: 149-152.
2. Fishelson L., & **Y. Loya** (1969). Experiments of rearing *Tilapia* hybrids in brackish water ponds near the Dead Sea. *Verh. Internat. Verein. Limnol.* 17: 602-610.
3. **Loya Y.**, & L. Fishelson (1969). Ecology of fish breeding in brackish water ponds near the Dead Sea (Israel). *J. Fish Biol.* 1: 261-278.
4. **Loya Y.**, & L.B. Slobodkin (1971). The coral reefs of Eilat (Gulf of Eilat, Red Sea). *Proc. Zool. Soc. London* 28: 117-140.
5. **Loya Y.** (1972). Community structure and species diversity of hermatypic corals at Eilat, Red Sea. *Mar. Biol.* 13: 100-123.
6. **Loya Y.** (1975). Possible effects of water pollution on the community structure of Red Sea corals. *Mar. Biol.* 29: 177-185.
7. Richman S., & **Y. Loya**, L.B. Slobodkin (1975). The rate of mucus production by corals and its assimilation by the coral reef copepod *Acartia negligens*. *Limnology and Oceanography*: 20: 918-923.
8. **Loya Y.** (1975). Environmental predictability in relation to life histories of reef corals. *Proc. Ecol. Soc. Is.* 6: 215-223.
9. **Loya Y.** (1976a). The Red Sea coral *Stylophora pistillata* is an r-strategist. *Nature* 259: 478-480.
10. **Loya Y.** (1976b). Recolonization of Red Sea corals affected by natural catastrophes and man-made perturbations. *Ecology* 57: 278-289.
11. **Loya Y.** (1976c). Effects of water turbidity and sedimentation on community structure of Puerto Rican corals. *Bull. Mar. Sci.* 26: 450-466.
12. **Loya Y.** (1976d). Skeletal regeneration rate in a Red Sea scleractinian coral population. *Nature* 261: 490-491.
13. **Loya Y.** (1976e). Settlement, mortality and recruitment in a Red Sea scleractinian coral population. , pp. 89-100 In: Coelenterate Ecology and Behavior Ed. By G.O. Mackie, Plenum Press, New York and London 744 p.
14. Benayahu Y., & **Y. Loya** (1977). Space partitioning by stony corals, soft corals and algae in the northern Gulf of Eilat, Red Sea. *Helgolander wiss. Meeresunters* 30: 362-382.
15. Kashman Y., M. Bonder, **Y. Loya**, & Y. Benayahu (1977). Cembranolid from marine origin (Red Sea), survey and isolation of a new Sinulariolid derivative. *Isr. J. Chem.* 16: 1-3.

16. **Loya Y.** (1977). Biology and Geology of Coral Reefs: A review. O.A. Jones and R. Endean (eds.) *The Quart. Rev. of Biology* 52: 110-111.
17. Benayahu Y. & **Y. Loya** (1977). Seasonal occurrence of benthic algae communities and grazing regulation by sea urchins at the coral reefs of Eilat, Red Sea. Third Int. Coral Reef Symp. Miami, Florida, pp. 383-389.
18. Rinkevich B. & **Y. Loya** (1977). Harmful effects of chronic oil pollution on a Red Sea scleractinian coral population. Third Int. Coral Reef Symp. Miami, Florida, pp. 585-591.
19. **Loya Y.** (1978). Plotless and transect methods. In: Monographs on Oceanic Methodology. Coral Reefs: Research Methods. D.R. Stoddart and R.E. Johannes (eds.). UNESCO Press, 5: 197-218.
20. Bradbury R.H. & **Y. Loya** (1978). A heuristic analysis of spatial patterns of hermatypic corals at Eilat, Red Sea. *American Naturalist*, 112: 439-507.
21. **Loya Y.** & B. Rinkevich (1979). Abortion effects in corals induced by oil-pollution. *Mar. Ecol. Prog. Ser.* 1: 77-80.
22. Rinkevich B. & **Y. Loya** (1979). The reproduction of the Red Sea coral *Stylophora pistillata*. I. Gonads and planulae. *Mar. Ecol. Prog. Ser.* 2: 133-144.
23. Rinkevich B. & **Y. Loya** (1979). The reproduction of the Red Sea coral *Stylophora pistillata*. II. Synchronization in breeding and seasonality of planulae shedding. *Mar. Ecol. Prog. Ser.* 2: 145-152.
24. Rinkevich B. & **Y. Loya** (1979). Laboratory experiments on the effects of crude oil on the Red Sea coral *Stylophora pistillata*. *Mar. Pollut. Bull.* 10: 328-330.
25. Kashman Y. & **Y. Loya**, M. Bonder and Y. Benayahu (1980). Gas liquid chromatograms of sesquiterpenes as fingerprints for soft coral identifications. *Mar. Biol.* 55: 255-259.
26. Carmely S., Y. Kashman, **Y. Loya** & Y. Benayahu (1980). New prostoglandin (PGF) derivatives from the soft coral *Lobophytum depressum*. *Tetrahedron Letters*, 21: 875-878.
27. **Loya Y.** & B. Rinkevich (1980). Effects of oil pollution on coral reef communities. *Mar. Ecol. Prog. Ser.* 2: 167-180.
28. Benayahu Y. & **Y. Loya** (1981). Competition for space among coral-reef sessile organisms at Eilat, Red Sea. *Bull. Mar. Sci.* 31: 514-522.
29. Slobodkin L.B. & **Y. Loya** (1981). The Background and History of Ecology in Israel. In: Handbook of Contemporary Developments in World Ecology, E.J. Kormondy and J.F. McCormick (Eds.). Greenwood Press pp. 549-559.
30. Shafir A. & **Y. Loya** (1983). Consumption and assimilation of coral mucus by the burrowing mussel *Lithophaga lessepsiana*. *Bull. Inst. Oceanogr. and Fish.* 9: 135-140.

31. Rinkevich B. & **Y. Loya** (1983). Response of zooxanthellae photosynthesis to low concentrations of petroleum hydrocarbons. **Bull. Inst. Oceanogr. and Fish.** 9: 109-115.
32. Rotem M., S. Carmely, Y. Kashman & **Y. Loya** (1983). Two new antibiotics from the Red Sea sponge *Psammaphysilla purpurea*. **Tetrahedron**, 39: 667-676.
33. Kinamoni Z., A. Groweiss, S. Carmely, Y. Kashman & **Y. Loya** (1983). Several new cembranoid diterpenes from three soft corals of the Red Sea. **Tetrahedron**, 39:1643-1648.
34. B. Rinkevich, **Y. Loya** (1983). Intraspecific competitive networks in the Red Sea coral *Stylophora pistillata*. **Coral Reefs**, 1: 161-172.
35. B. Rinkevich, **Y. Loya** (1983). Oriented translocation of energy in grafted reef corals. **Coral Reefs**, 1: 243-247.
36. Y. Benayahu, **Y. Loya** (1983). Surface brooding in the Red Sea soft coral *Parerythropodium fulvum fulvum* (Forskal, 1775). **Biol. Bull.** 165: 353-369.
37. B. Rinkevich, **Y. Loya** (1983). Short term fate of photosynthetic products in a hermatypic coral. **Jour. Exp. Mar. Biol. and Ecol.** 73: 175-184.
38. S. Carmely, **Y. Loya** and Y. Kashman (1983). Siphonellinol, a new triterpene from the marine sponge *Siphonochalina siphonella*. **Tetrahedron Letters**, 24: 3673-3676.
39. Y. Benayahu, **Y. Loya** (1984). Life history of the Red Sea soft coral *Xenia macrospiculata* Gohar, 1940. I. Annual dynamics of gonadal development. **Biol. Bull.** 166: 32-43.
40. Y. Benayahu, **Y. Loya**, (1984). Life history of the Red Sea soft coral *Xenia macrospiculata* Gohar, 1940. II. Planulae shedding and post larval development. **Biol. Bull.** 166: 44-53.
41. B. Rinkevich, **Y. Loya** (1984). Does light enhance calcification in hermatypic corals? **Mar. Biol.** 80: 1-6.
42. **Y. Loya**, G. Bull and M. Pichon. (1984). Tumor formations in scleractinian corals. **Helgolander wiss. Meeresunters.** 37: 99-112.
43. B. Rinkevich, **Y. Loya** (1984). Coral illumination through an optic glass-fiber: incorporation of <sup>14</sup>C photosynthates. **Mar. Biol.** 80: 7-15.
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45. Y. Benayahu, **Y. Loya**. (1985). Settlement and recruitment of a soft coral: Why is *Xenia macrospiculata* a successful colonizer? **Bull. Mar. Sci.** 36: 177-188.
46. B. Rinkevich, **Y. Loya** (1985). Intraspecific competition in a reef coral: effects on growth and reproduction. **Oecologia**, 66: 100-105.

47. L. Muscatine, L.R. McCloskey and **Y. Loya** (1985). A comparison of the growth rates of zooxanthellae and animal tissue in the Red Sea coral *Stylophora pistillata* Fifth Int. Coral Reef Congress, Tahiti, 6:119-123.
48. **Y. Loya** (1985). Seasonal changes in growth rate of a Red Sea coral population. Fifth Internat. Coral Reef Congress, Tahiti, 6:187-191.
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53. R.H. Bradbury, **Y. Loya**, R.E. Reichelt and W. T. Williams (1986). Patterns in the structural typology of benthic communities on two coral reefs of the Central Great Barrier Reef. ***Coral Reefs***, 4: 161-167.
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55. C.L. Browdy, A. Hadani, T. Samocha and **Y. Loya** (1986). The reproductive performance of wild and pond reared *Penaeus semisulcatus* de Haan. ***Aquaculture***, 59: 251-258.
56. **Y. Loya**, B. Rinkevich (1987). Effects of Petroleum Hydrocarbons on Corals. In: Human Impacts on Coral Reefs: Facts and Recommendations. B. Salvat (Ed.). UNESCO Press, pp. 91-102.
57. Y. Benayahu, **Y. Loya** (1987). Long-term recruitment of soft corals (Octocorallia: Alcyonacea) on artificial substrata at Eilat (Red Sea). ***Mar. Ecol. Prog. Ser.*** 38: 161-167.
58. B. Rinkevich, **Y. Loya** (1987). Variability in the pattern of sexual reproduction of the coral *Stylophora pistillata* at Eilat, Red Sea: A long term study. ***Biol. Bull.*** 173: 335-344.
59. S. Carmely, M. Cojocar, **Y. Loya** and Y. Kashman (1988). Ten new rearranged spongian diterpenes from two *Dysidea* species. ***J. Org. Chem.*** 53: 4801-4807.
60. M. Ilan, **Y. Loya** (1988). Reproduction and settlement of the coral reef sponge *Niphates* sp. (Red Sea). Proc. Sixth Int. Coral Reef Symp. Townsville, Australia. 2: 745-749.
61. **Y. Loya** (1988). Red Sea - Key environment: A review. A.J. Edwards and S.M. Head (eds). ***The Quart. Rev. of Biology***, 63: 475-476.

62. S. Carmely, M. Roll, **Y. Loya** and Y. Kashman (1989). The structure of Erylosid a: A new antitumor and antifungal disaccharide from the Red Sea sponge *Erylus lendenfeldi*. *J. Nat. Prod.* 52: 167-170.
63. B. Rinkevich, **Y. Loya** (1989). Reproduction in regenerating colonies of the coral *Stylophora pistillata*. *Environ. Qual. Ecosyst. Stability*, 4: 257-265.
64. R. Klein, **Y. Loya**, G. Gvirtzman, P.S. Isdale and M. Susic (1990). Seasonal rainfall in the Sinai desert during the late Quaternary inferred from fluorescent bands in fossil corals. *Nature*, 345: 145-147.



65. M. Ilan, Y. Loya (1990). Sexual reproduction and settlement of a coral reef sponge *Chalinula* sp. from the Red Sea. *Mar. Biol.* 105: 25-31.
66. N. E. Chadwick, Y. Loya (1990). Regeneration after experimental breakage in the solitary reef coral *Fungia granulosa* Klunzinger, 1879. *J. Exp. Mar. Biol. Ecol.* 142: 221-234.
67. M. Ilan, Y. Loya (1990). Ontogenetic variation in sponge histocompatibility responses. *Biol. Bull.* 179: 279-286.
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70. Y. Shlesinger, Y. Loya (1991). Larval development and survivorship in the corals *Favia fava* and *Platygyra lamellina*. *Hyrobiologia*, 216: 101-108.
71. R. Klein, Y. Loya (1991). Skeletal growth and density patterns of two scleractinian corals from the Gulf of Eilat, Red Sea. *Mar. Ecol. Prog. Ser.* 77: 253-259.
72. B. Lazar, Y. Loya (1991). Bioerosion of coral reefs - a chemical approach. *Limnol. and Oceanography*, 36: 377-383.
73. A. Abelson, B. S. Galil and Y. Loya (1991). Skeletal modifications in stony corals caused by indwelling crabs: hydrodynamical advantages for crab feeding. *Symbiosis*, 10: 233-248.
74. S. Hirsch, A. Rudi, Y. Kashman and Y. Loya (1991). New avarol and avarone derivatives from the marine sponge *Dysidea cinerea*. *J. Nat. Prod.* 54: 92-97.
75. O. Mokady, D. B. Bonar, G. Arazi and Y. Loya (1991). Coral host specificity in settlement and metamorphosis of the date mussel *Lithophaga lessepsiana* (Vaillant 1865). *J. Exp. Mar. Biol. Ecol.* 146: 205-216.
76. B. Rinkevich, Z. Wolodarsky and Y. Loya (1991). Coral-crab association: A compact domain of a multilevel trophic system. *Hydrobiologia*, 217: 279-284
77. R. Klein, O. Mokady and Y. Loya (1991). Bioerosion in ancient and contemporary corals of the genus *Porites*: Patterns and paleoenvironmental implications. *Mar. Ecol. Prog. Ser.* 77: 245-251.
78. R. Klein, J. Paetzold, G. Wefer and Y. Loya (1992). Seasonal variations in the stable isotopic composition and skeletal density pattern of the coral *Porites lobata* (Gulf of Eilat, Red Sea). *Mar. Biol.* 112: 259-263.
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98. A. Lotan, L. Fishman, **Y. Loya** and E. Zlotkin (1995). Delivery of nematocyst toxin. *Nature*, 375: 456-457.
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100. **Y. Loya** (1995). Development and protection of the Gulf of Aqaba. In: Practical Peacemaking in the Middle East. (Ed. by S. L. Spiegel and D. J. Pervin). Garland Publishing Inc. N.Y, and London. pp. 53-63.
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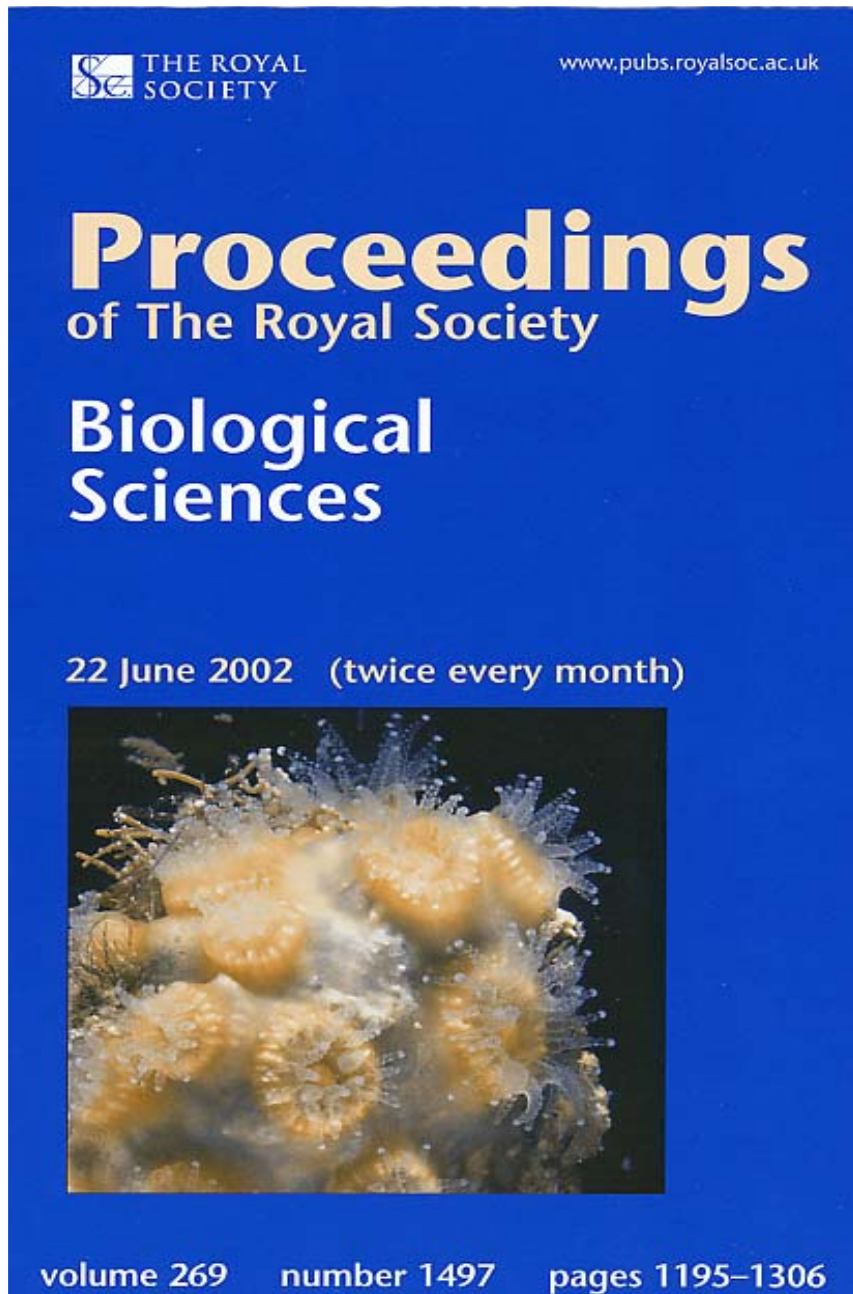


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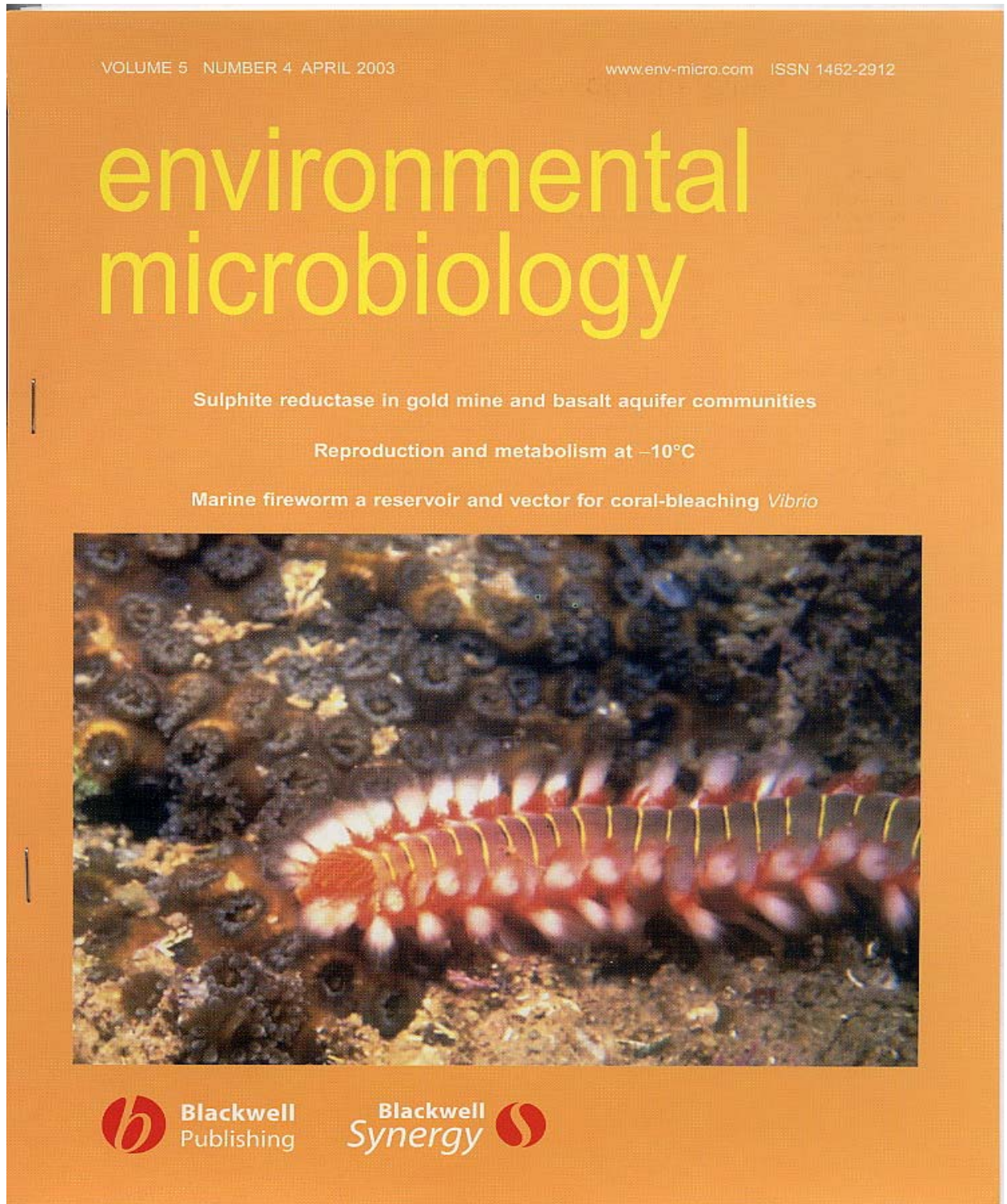
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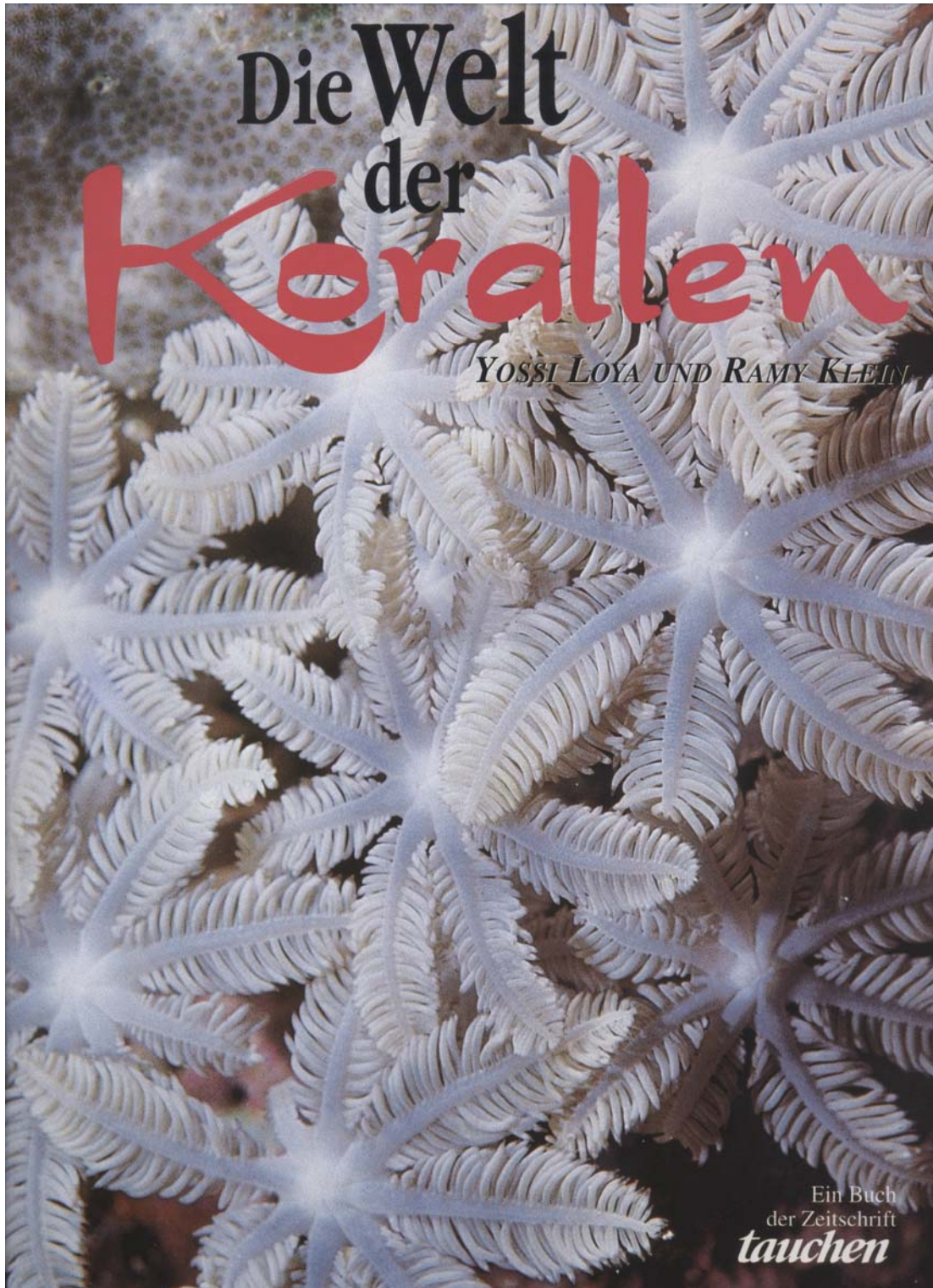


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Yossi Loya and Rami Klein

*"Die Welt der Korallen" (1996)*

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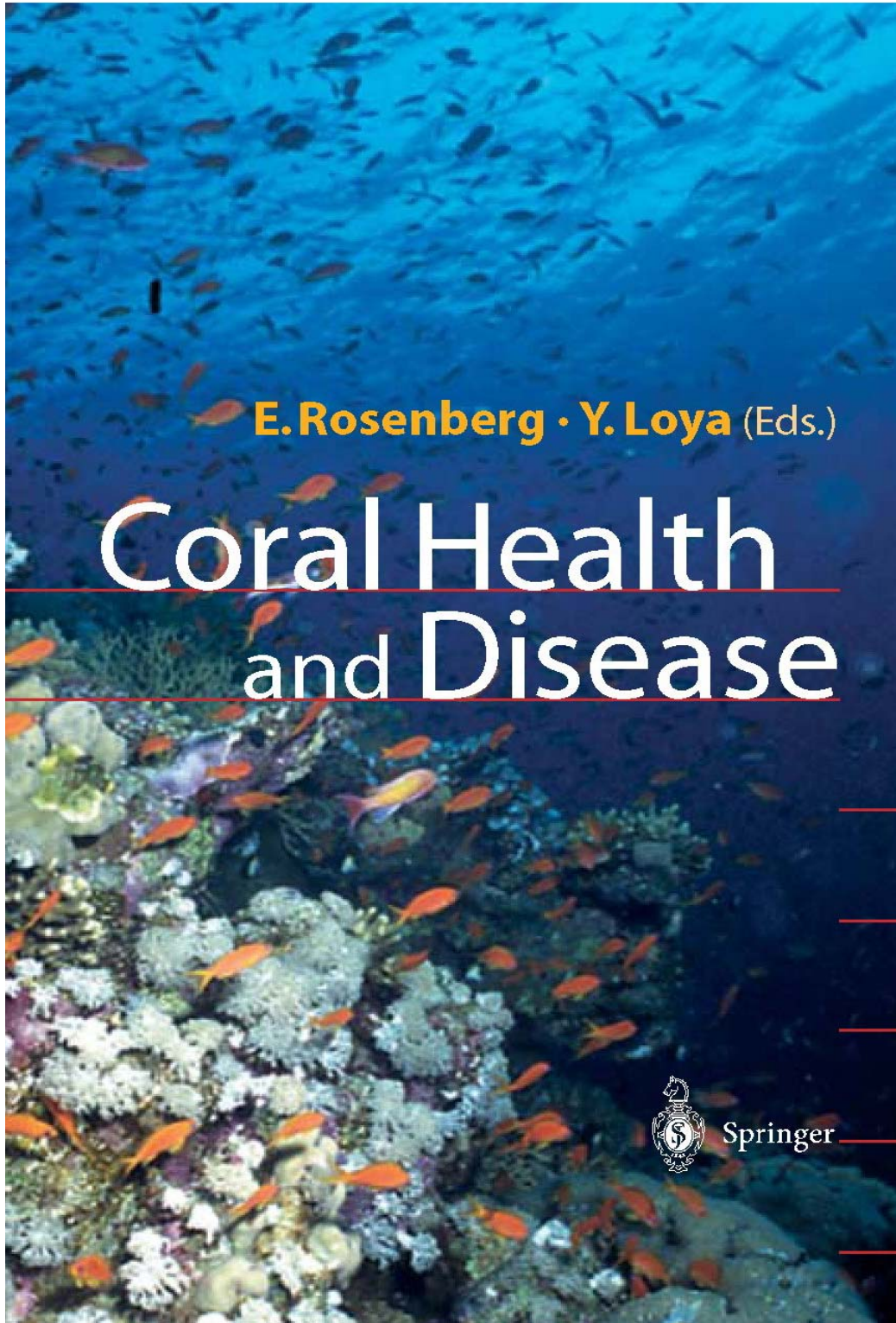


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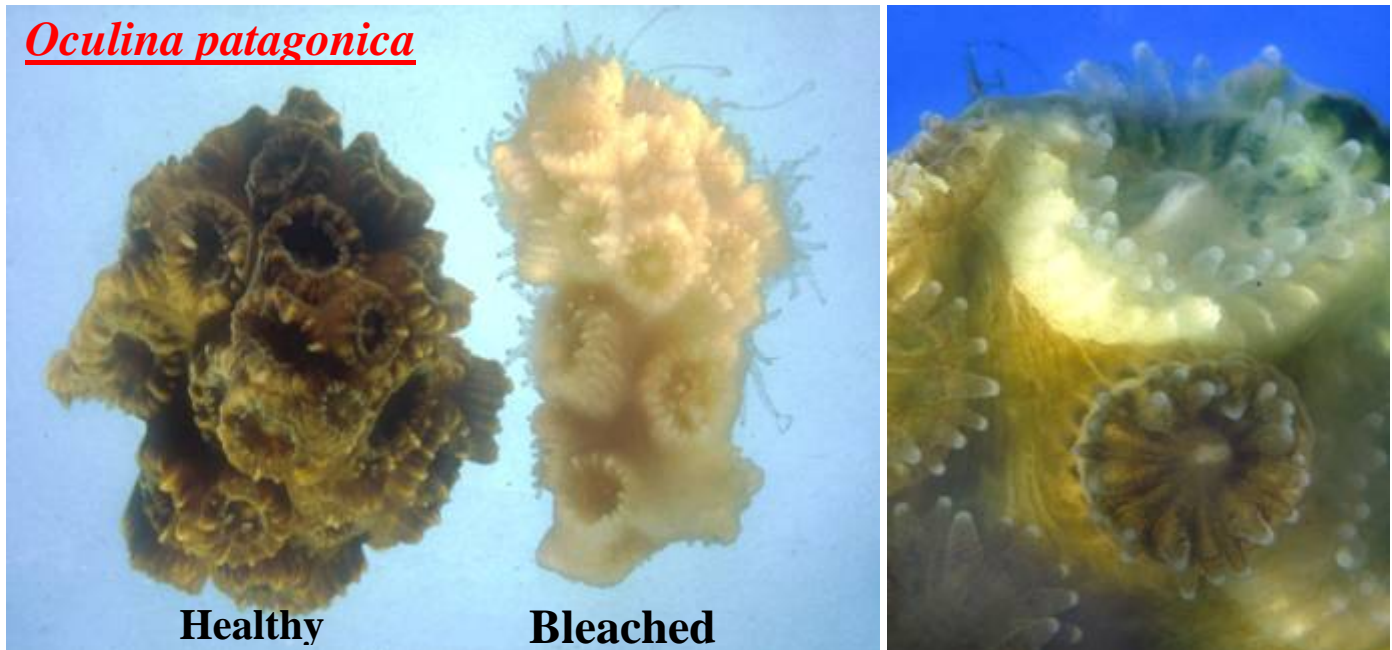
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## Current Projects

### 1. Bacterial infection causes coral bleaching: The effect of the pathogenic bacteria *Vibrio shiloi* on Mediterranean coral populations (in collaboration with E. Rosenberg)



### 2. Effects of natural and anthropogenic disturbances on coral reef communities: Diseases in corals (in collaboration with E. Rosenberg)



**3. Biologically active materials derived from coral-reef organisms in search for new drugs** (in collaboration with Y. Kashman and M. Ilan, TAU)



**4. Life history strategies of reef corals: Reproductive strategies**

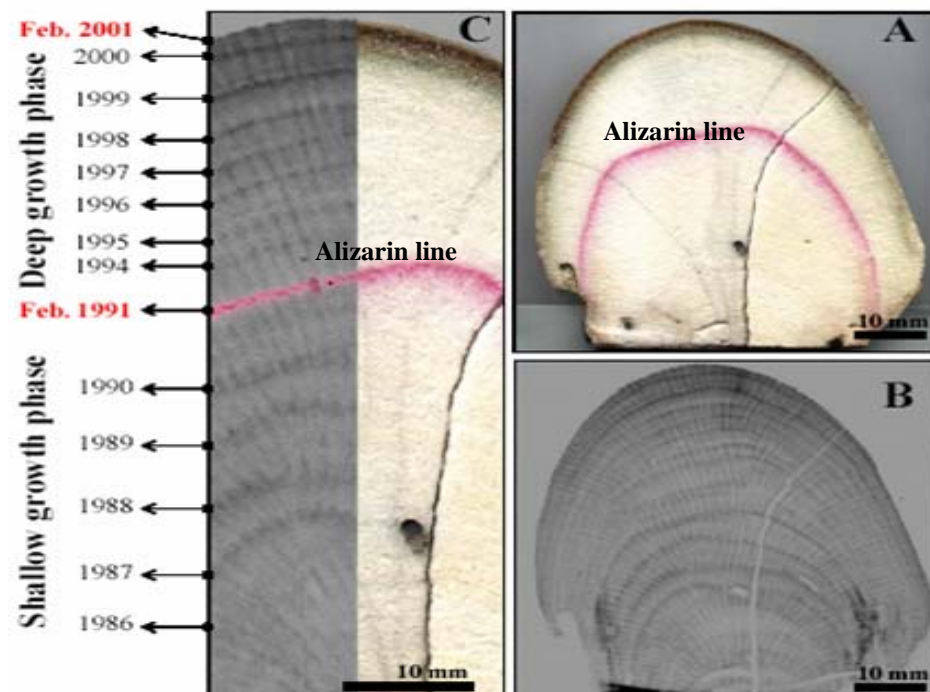


**5. Global climatic changes and its effect on biodiversity of coral reef communities: World Bank/ UNESCO Project on the consequences of Coral Bleaching in the Great Barrier Reef (Australia), Zanzibar, Philippines & Mexico**



**6. The use of contemporary corals in predictive models concerned with global climate change** (Ph.D. thesis of M. Rosenfeld in collaboration with A. Shemesh)

Stony corals have growth rings. Every two rings comprise one year of growth, which may be only a few mm in length. Corals may be used as environmental “tape recorders” recording in their carbonate skeleton (through oxygen and carbon isotope fractionation) changes in water temperatures, occurrence of various pollutants and other environmental stressors. *Porites* colonies were stained with Alizarin red-S and then reciprocally transferred between 6 and 40m in February 1991 and were inspected 10 years later in February 2001. This provided us with the unique opportunity to maintain the coral’s genetic integrity and hence to isolate environmental factors affecting skeletal isotopic composition and density patterns.





## Conservation Ecology of Coral-Reefs

# The coral reefs of Eilat: Past, present and future

Yossi Loya

In: *Coral Reef Health and Disease*; E. Rosenberg and Y. Loya (Eds).  
Springer-Verlag; Berlin, Heidelberg, New York. pp. 1-34, 2004

### Effects of fish farm nutrient pollution on the coral reefs of Eilat

**Deterioration** in water quality due to eutrophication adversely affects coral reef community structure by promoting algal growth and turbidity, reducing light necessary for coral growth, adversely affecting reproduction and has also been associated with increased bioerosion and epizootics. During the last 10 years, the yield of the fish farm industry in Eilat has grown exponentially from 300 tons/yr in 1994 to 2700 tons/yr in 2005. Cultured fish fed by 4500 tons/year “fish pellets” result in nutrient pollution (eutrophication), of the water column by 300 tons of Nitrogen and 50 tons of Phosphate annually.

