

## *CURRICULUM VITAE*

2-11-2015

BERRY PINSHOW

Mitrani Department of Desert Ecology

Jacob Blaustein Institutes for Desert Research (primary affiliation) and Department of Life Sciences, Ben-Gurion University of the Negev.

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### **I. PERSONAL**

Born: Johannesburg, South Africa, 23 August 1947

Immigrated to Israel: January 1962

Military Service: January 1966 - October 1968; October 1971 - December 1971

Married: 21 March 1972, to Hana Pertzov, three children

Home address: P.O.B. 37, 84990 Midreshet Ben-Gurion, Israel.

Home phone: +972-8-6532044

### **II. EDUCATION**

B.Sc. Tel-Aviv University (Biology), 1968 - 1971

Ph.D. Duke University (Zoology), December 1975 (Thesis Advisor: K. Schmidt-Nielsen)

### **III. ACADEMIC APPOINTMENTS**

2009 - 2012: Chair, Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev

September 2007: Guest teacher, University of the Witwatersrand, Department of Animal, Plant and Environmental Science

August 1, 2006 - June 10, 2009: Chair, Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for-Desert Research, Ben-Gurion University of the Negev

September 2005: Guest teacher, University of the Witwatersrand, Department of Animal, Plant and Environmental Science

December 1999 - June 2006: Deputy Director, Jacob Blaustein Institute for-Desert Research, Ben-Gurion University of the Negev

July 1999 - April 2001: Chair, Mitrani Department of Desert Ecology, Jacob Blaustein Institute for-Desert Research, Ben-Gurion University of the Negev

August 1998 - July 1999: Visiting Professor of Physiology and Biophysics, Medical Sciences Program, Indiana University (Sabbatical year with Henry D. Prange)

October 1995: Full Professor, Jacob Blaustein Institute for Desert Research and Department of Life Sciences, Ben-Gurion University of the Negev

October 1995 - July 1998: Head, Mitrani Center for Desert Ecology, Jacob Blaustein Institute for-Desert Research, Ben-Gurion University of the Negev

Summer 1991- Guest of South African Council for Research and Development.

Summer 1989 - Summer 1990: Visiting Professor, Department of Zoology, University of Wisconsin, Madison (Sabbatical year)

Fall 1988: Associate Professor, Jacob Blaustein Institute for Desert Research and Department of Life Sciences, Ben-Gurion University of the Negev

Summer 1983 - Summer 1984: Adjunct Associate Professor, Biology Department, Las Cruces, NM (Sabbatical Year)

Spring 1983: Senior Lecturer (with tenure), Jacob Blaustein Institute for Desert Research and Department of Life Sciences, Ben-Gurion University of the Negev  
Summer 1981: Biology Department, New Mexico State University, (with M. H. Bernstein)  
Summer 1979 - Research Associate, Biology Department, New Mexico State University, (with M. H. Bernstein)  
Fall 1977: Lecturer, Jacob Blaustein Institute for Desert Research and Department of Biology (now Life Sciences), Ben-Gurion University of the Negev  
Spring 1976 - Summer 1977: Post-doctoral Fellow, Department of Zoology, U.W., Madison, (with Warren P. Porter)  
Summer 1973: Winter 1975: Research Assistant, Duke University Zoology Department, (with Knut Schmidt-Nielsen)  
Spring 1972: Teaching Assistant, Duke University Zoology Department - Introductory Biology.  
Fall 1972 - General Physiology. Spring 1973 - Introductory Biology.

#### **IV. HONORS AND AWARDS**

1975 - Harwood C. Belding Award in for best graduate student paper (Environmental and Exercise Physiology section of the American Physiological Society).  
1977 - Young Investigator Award to attend the Paris meeting of the International Union of Physiological Sciences, August 1977.  
1981-1983: Bat Sheva de Rothschild Fellow.  
1985 - Haim Sheba award for outstanding scientific contributions in Desert Biology.  
1987 - Distinguished foreign guest lecturer of the Council of the American Physiological Society at Centennial Celebration meeting of the APS, Washington, DC, March 29-April 3, 1987.  
1997 - Invited to Introduce August Krogh Lecturer, Dr. Knut Schmidt-Nielsen. Federation of American Societies of Experimental Biology. 6-9 April 1997. New Orleans.  
2007 - 4-19 September: Guest teacher - Distinguished Professor Program, University of the Witwatersrand, Johannesburg, South Africa.  
2009 - Ben-Gurion University Presidential Award for Academic Excellence at the Jacob Blaustein Institutes for Desert Research  
2011 - BIDR Director's award - for publishing most papers with students as first authors 2008-2010.  
2013 - American Physiological Society Research Career Enhancement Award to study the relationship between animal burrow dwelling construction and demands for respiratory gas exchange, humidity control, and body temperature regulation. \$4000.

#### **V. PROFESSIONAL SOCIETY MEMBERSHIPS**

International Ornithological Union - Fellow  
American Physiological Society  
American Ornithologists' Union  
Cooper Ornithological Society  
European Ornithologists' Union  
Sigma XI, the Scientific Research Society of North America  
Society for Experimental Biology  
Society for Integrative and Comparative Biology  
Zoological Society of Israel  
DesertNet International

## VI. GRANTS

### Competitive

- 1978 - Water loss from birds' eggs under controlled conditions: Do eggs have autonomous control over their water loss? Bat-Sheva de Rothschild Foundation Grant. IL 25,000.
- 1979 - Water loss from birds' eggs under controlled conditions: Do eggs have autonomous control over their water loss? Israel National Academy of Sciences Grant. IL 94,500.
- 1980 - Acid-base control, respiration, and temperature regulation in avian hyperthermia. As collaborating investigator with M. H. Bernstein (Dept. of Biology, New Mexico State University, Las Cruces, New Mexico). US National Science Foundation grant No. PCM 79-21856. \$44,364 per year for two years.
- 1981 - Comparative ecophysiology of the chukar and sand partridges in the Negev. With P. U. Alkon (Ben-Gurion University) and M. H. Bernstein, Dept. of Biology, New Mexico State University, Las Cruces, New Mexico). US - Israel Binational Science Foundation Grant No. 2496/81. \$60,000 for two years. 2496/81
- 1981 - A physiological comparison of the chukar and the sand partridge: thermoregulation, water balance, and acid-base status in the heat. Bat Sheva de Rothschild foundation Grant. \$12,000 for two years.
- 1985 - Physiological quantification of competition between gerbil species in the Negev. With Z. Abramsky and A. A. Degen (Ben-Gurion University) and W. P. Porter (University of Wisconsin, Madison). US - Israel Binational Science Foundation Grant No. 84-00065. \$180,000 for 3 years.
- 1986 - Physiological quantification of competition between gerbil species in the Negev. With Z. Abramsky and A. A. Degen (Ben-Gurion University). Whitehall Foundation Grant. \$68,500 for 3 years.
- 1987 - Optimal Dispersal: Costs and benefits of recurrent dispersal in a desert widow spider. With Yael Lubin (Ben-Gurion University and Steven Ellner (NC State University). US - Israel Binational Science Foundation Grant No. 86-00092/1. \$60,000 for 3 years.
- 1990 - Bird migration: effect of water economy on flight duration. With Marvin H. Bernstein (New Mexico State University). US - Israel Binational Science Foundation Grant No. 89-00350. \$100,000 for 3 years
- 1991 - Bird Migration Survey - Voice of America transmission Station Site. \$220,000 for 2 years from TOMER (Management of US Radio Relay Station, Israel).
- 1992 - Physiology teaching laboratory modernization in Department of Life Sciences - IS150,000 from VATAT (The Committee for Planning and Funding Higher Education in Israel).
- 1992 - National Geographic Society research grant 4552-91. Thermoregulatory adaptations of a unique grasshopper to desert environment. 1992. CI to H. D. Prange, Indiana University. \$5,000
- 1993 - Thermal imaging system - \$164,000 from The Israel Science Foundation (including matching from Ben-Gurion University). With Zvika Abramsky and Burt Kotler.
- 1994 - Water loss during long-distance flight in birds: laboratory and field tests of a theoretical model. US - Israel Binational Science Foundation grant 93-00232 with David Goldstein, Wright State University, Dayton, Ohio. \$120,000 for 3 years.
- 1994 - Does bird predation determine habitat segregation of tenebrionid beetles in a desert ecosystem? With Yoram Ayal. \$5,000 BGU one-year internal grant.
- 1995 - Biogeography of birds in northern Negev JNF plantations. With Zvika Abramsky IS21,000 one year Jewish National Fund grant.
- 1995 - Integrating behavioral responses of individual *Gerbillus allenbyi* and *G. pyramidum* with their measured population responses. With Zvika Abramsky. The Israel Science Foundation. \$150,000 for 3 years.

- 1997 - Nitrogen excretion in nectarivorous birds: are sunbirds (*Nectarinia osea*) facultatively ammonotelic? IS 15,000 BGU internal, one-year seed money grant.
- 1998 - Nitrogen excretion in nectarivorous birds: are sunbirds (*Nectarinia osea*) facultatively ammonotelic? Israel Science Foundation. \$129,000 for 3 years.
- 1999 - Integration of osmoregulatory, digestive and metabolic functions in nectarivorous birds. With Dr. Carlos Martinez del Rio (Dept. of Ecology and Evolutionary Biology, University of Arizona, Tucson). US - Israel BSF grant 98-178, \$76,510 for 3 years.
- 1999 - Dietary energetics and community ecology of desert insectivorous bats. With Carmi Korine. NIS 15,000. BGU one-year internal seed money grant.
- 2000 - Community ecology of desert insectivorous bats. With Carmi Korine. \$12,000. National Geographic Society grants 6875-00.
- 2000 - "Taking physiology into the field: advances in investigating physiological function in free-living vertebrates". US NSF to support for this symposium at SICB 2001 meeting in Chicago. With David Goldstein, Wright State University. \$6000.
- 2001 - Pinshow, B. and C. Korine with Z. Abramsky and A. Bouskila. Body composition analyzer, and open-flow respirometry system. Equipment grant from Israel Science Foundation for \$110,000.
- 2001 - Pinshow, B. with C. Korine. Reproductive physiology in the European free-tailed bat (*Tadarida teniotis*) and Hemprich's long-eared bat (*Otonycteris hemprichii*) in the Negev and its effects on foraging behavior. Israel Science Foundation \$44,000/year for 4 years.
- 2002 - Pinshow, B. and C. Korine. Role of ethanol in the nutritional and sensory physiology of frugivores. With Robert Dudley (Section of Integrative Biology (IB), University of Texas at Austin). US - Israel Binational Science Foundation grant 2001038, \$50,000 for one year.
- 2006 - Pinshow, B., Z. Hacoheh and I. Khozin-Goldberg (BGU) with S. McWilliams (U. Rhode Island). How diet, body-composition and hypothermia affect fattening in migrating birds. US - Israel Binational Science Foundation grant 2005119, \$140,000 for four years.
- 2010 - Pinshow, B and P. Berliner. The relations between soil permeability, the gaseous environment of burrows and acid-base physiology of rodents. Israel Science Foundation \$53,000/year for 4 years.

#### **Non-Competitive**

- 1981 - Development of the Lady Edith Wolfson Laboratory for Environmental Physiology. Edith and Isaac Wolfson Charitable Trust Grant \$100,000.
- 2012 - Africa Centre of BGU \$1000.
- 2013 - Africa Centre of BGU \$1000.

#### **VII. COURSES TAUGHT** (Albert Katz International School for Desert Studies (AKIS) and Life Sciences Department (LSD), Ben-Gurion University)

- Introductory Animal Physiology (Team taught)
- Vertebrate Zoology (Team taught)
- Animal Physiology Laboratory
- Animal Adaptations to Extreme Environments
- Comparative and Environmental Physiology of Desert Animals (Team taught interuniversity course)
- Ecology Field Camp (current - team taught, LSD) Spring Semester- 1985-2014
- Physiological Ecology (current-LSD) Fall Semester- 1985-2014
- Workshop in ecology and conservation (graduate seminar) ecology program. Fall and

Spring semesters – 1985-2014

- Workshop on the biology of desert dwelling bats (AKIS) International course with participants from all the universities in Israel and several from abroad Summer - current (team taught) usually from 28 July to 10 August.
- Cape Vidal Field Ecology Course - Department of Animal, Plant and Environmental Sciences, the University of the Witwatersrand and the Mitrani Department of Desert ecology. Supported by the Blaustein Center For Scientific Cooperation. September 2005 and September 2007.

#### **VIII. CURRENT RESEARCH INTERESTS**

Physiological ecology; energy and water exchange between animals and the environment; physiology of thermoregulation and osmoregulation in desert animals - especially birds, bats and rodents. Burrow architecture: How are burrows "designed", through natural selection on their builders to suite the builder's physiological needs, thus becoming part of the organisms "extended physiology".

#### **IX. COMMITTEE AND PUBLIC SERVICE**

- Organizing Committee - 9th International Congress of Comparative Physiology and Biochemistry, to be held in Krakow, Poland 23-28 August 2015. (APS/CEPS representative).
- Symposium convener. Ideas and Discoveries in Comparative Physiology and Biochemistry (ICCPB 2015). 9th International Congress of Comparative Physiology and Biochemistry, to be held in Krakow, Poland 23-28 August 2015.
- Member of *ad hoc* search committee for the next director of the Jacob Blaustein Institutes for Desert Research. 4 March 2014.
- Editorial Board, *Integrative and Comparative Biology*. January 2014- current.
- Member of the *ad hoc* committee of the Israel Zoological Society for choosing new Honorary Members. Dr. Shai Markman, chair. 2013.
- International Organizing Committee. 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation (PPTR), held at Skukuza, South Africa, 7-12 September 2014.
- Symposium convener. Behavioral Thermoregulation. 5<sup>th</sup> International Symposium on the Physiology and Pharmacology of Temperature Regulation (PPTR), which will be held in South Africa in the Kruger National Park from 7-12 September 2014.
- Councilor -International Sub-Committee Member, American Physiological Society - Comparative & Evolutionary Physiology Section. Appointment, April 2013 - March 2015.
- Symposium Co-convener (with Amos Bouskila and Ally Harari). Regeneration and change in ecosystems after disturbance. The annual Merav Ziv Symposium held on the Sede Boqer Campus of Ben-Gurion University, 19 May 2012.
- Member of the Organizing Scientific Committee of the International Ornithological Congress to be held in Tokyo, September 2014.
- Symposium Co-convener (with Michał Wojciechowski and Murray Humphries). "Environment, Energetics and Fitness: A Symposium Honoring Donald W. Thomas" at the annual meeting of The Society of Integrative and Comparative Biology 2011. 3-7 January, Salt Lake City, UT.
- Committee of Representatives (COR) of the International Ornithological Union (replaces IOC, see below) 2010-current.
- BGU University-wide Promotions and Tenure Committee. Appointed member. September 2010 - 2014.
- BGU Search Committee for Dean of the Kreitman Post-graduate School for Advanced

- Studies, May 2010
- US-Israel Binational Science Foundation Ecology Panel 2008-2009
- October 2008-current. Appointed member of BGU Senate, BIDR representative.
- Fulbright Post-Doctoral Evaluation Committee 2008, 2009, 2010 (US-Israel Educational Foundation)
- Committee for the Choice of Israel's National Bird (Dr. Yossi Leshem, Chair). Jan. - May 2008.
- BGU Academic Ethics Committee 1-2-2008 - current.
- International Organizing Committee. Forth International Conference of Comparative Physiology & Biochemistry in Africa: Pressures of Life: Molecules to Migration. Maasai-Mara, Kenya: 19-25 July 2008.
- Program Committee of American Physiological Society Intersociety Meeting: Comparative Physiology 2006: Integrating Diversity. October 8-11, Virginia Beach, VA.
- Symposium Co-convenor. "Linking Body Size and Physiology with Life History: Walking in the Footsteps of Bill Calder" at American Physiological Society Intersociety Meeting: Comparative Physiology 2006: Integrating Diversity. October 8-11, Virginia Beach
- Editorial Board, *Comparative Biochemistry and Physiology*. April 2004 - current.
- September 2004-August 2007. Elected member of BGU Senate, BIDR representative.
- 2004 - Israel Science Foundation Grant Review Committee - Ecology.
- Advisory Committee for Environmental Physiology. International Union of Physiological Sciences. Yvon LeMaho, Chair. May 2003 - July 2005
- Member of Series Advisory Board - *Ecological and Environmental Physiology*, Warren Burggren Editor. Oxford University Press. May 2003 - current
- Member of the International Ornithological Committee, organizing body of the International Ornithological Congress. Elected 26 August 2002 - 2010 (see IOU above).
- International Organizing Committee. Third International Conference of Comparative Physiology & Biochemistry in Africa: How Animals Work. Ithala, Kwazulu-Natal, South Africa: 7-13 August 2004.
- Symposium co-convenor. Taking physiology to the field I. (with David Goldstein, Wright State University). Third International Conference of Comparative Physiology & Biochemistry in Africa: How Animals Work. Ithala, Kwazulu-Natal, South Africa: 7-13 August 2004.
- Session Co-convenor (with Prof. Michal Horowitz) - Energy metabolism, heat stress and thermoregulation. Annual meeting of Israel Society for Physiology and Pharmacology. Ma'ale Hachamisha. 18 October 2001.
- International Organizing Committee. Second International Conference of Comparative Physiology & Biochemistry in Africa: How Animals Work. Chobe National Park, Botswana: 18-24 August 2001.
- Symposium Co-convenor. Birds-Water and thermal relations; life under extremes. With Ian van Tets (BGU). Second International Conference of Comparative Physiology & Biochemistry in Africa: How Animals Work. Chobe National Park, Botswana: 18-24 August 2001.
- Symposium Co-convenor. Taking physiology into the field: advances in investigating physiological function in free-living vertebrates". With David Goldstein, Wright State University. Society for Integrative and Comparative Biology 2001 meeting in Chicago, January 2001.
- Symposium Co-convenor: The Energy Sources and their Regulation and Utilization in Flying Birds (APS) with Dr. Eldon Braun. At Experimental Biology 2000: Milestones and goals. Cambridge, England, August 2000.
- Conference Organizing Committee: "Raptors 2000" 2 - 8 April 2000, Eilat Israel.

- Conference Organizing Committee: Biodiversity in Drylands: towards a unified framework and identification of research needs- an international workshop, BGU, June 1999.
- Board of Directors, Ramon Science Center, Appointed Nov. 1999. Elected chairman Nov. 2000 - March 2006.
- Board of Directors, Keren Kayemet Le'Yisrael Desertification, and Restoration Ecology Research Center. November 1997.
- December 1999 - 2005. BIDR Liaison with the Sede Boqer High School for Environmental Education (for encouragement of high school student participation in research projects).
- Editorial Board, Physiological Zoology (Now Physiological and Biochemical Zoology). December 1996 - current.
- Symposium co-convener - "Physiological approaches to ecological questions about water and energy in birds" XXII International Ornithological Congress - Durban, South Africa, August 1998.
- Symposium co-convener - "Temperature measurement in free-living animals". Fifth European Conference on Wildlife Telemetry. Strasbourg (France), August 25-30, 1966
- Blaustein Institute for Desert Research - Information Center steering committee. November 1995 - 1997.
- Blaustein Institutes for Desert Research Directorate (Va'adat Machon). July 1995 - 2005.
- Scientific Advisory Committee to the Eilat International Birdwatching and Research Center. April 1994 - 2011.
- Board of Directors, the Eilat International Birdwatching and Research Centre. 1995 – 2011.
- Symposium co-convener - "Physiological constraints on bird migration", XXI International Ornithological Congress, Hofburg, Vienna. August 20-15, 1994.
- Organizing committee of workshop "Theoretical and applied aspects of nature conservation" for the Zoological Society of Israel. 18 November 1993.
- Editorial Board - Israel Journal of Zoology. 1992 - 1999.
- Jacob Blaustein Institute for Desert Research Academic Affairs Committee. 1992 - 1995.
- Council of the Society for Preservation of Nature in Israel - Ben-Gurion University representative. 1989 - 1998.
- Organizing Committee of Bi-national Workshop: "What's Special about Desert Ecology?" held by the Mitrani Center for Desert Ecology, 14 - 22 March, 1987. Sponsored by United States-Israel Binational Science Foundation
- Organizing Committee of Zoological Society of Israel annual meeting, October 1985.
- Society Committee - Zoological Society of Israel, 1978 - 1980, 1984 - 1985, 1990 - 1995
- Library Committee - Jacob Blaustein Institute for Desert Research, 1984 - 1987.
- Executive Committee - Blaustein International Center for Desert Studies, 1984 - 1988.
- Graduate Studies Committee - Life Sciences Department, Ben-Gurion University, 1980 - 1983, 1984 - 1986, 1987 - 1990, 1994 - 1997
- Organizing Committee of Eighth International Biometeorological Congress (Shefayim, Israel, September 1979).
- Undergraduate Studies Committee - Biology Department, Ben-Gurion University, 1977 - 1979.
- Jacob Blaustein Institute for Desert Research - New Mexico State University Cooperative Research Program Steering Committee.

#### **X. Ph.D. THESIS**

Pinshow, B. P. 1975. Energy expenditure for thermoregulation and locomotion in emperor penguins. Duke University, Durham NC.

## XI. PUBLICATIONS

### A. Peer Reviewed Journal Papers

1. Fedak, M. A., B. Pinshow and K. Schmidt-Nielsen. 1974. Energy cost of bipedal running. *Am. J. Physiol.* 227:1038-1044.
2. Pinshow, B., M. A. Fedak and K. Schmidt-Nielsen. 1974. Metabolic response of starving emperor penguins at low temperatures. *Antarctic J. of US* 9:96-97.
3. Fedak, M. A., B. Pinshow and K. Schmidt-Nielsen. 1974. Emperor and Adélie penguins: energy cost of walking. *Antarctic J. of US* 9:97-98.
4. Pinshow, B., D. R. Battles, H. Pinshow and K. Schmidt-Nielsen. 1975. Emperor penguins: thermoregulation and locomotion. *Antarctic J. of US* 10:127-129.
5. Pinshow, B., M. A. Fedak, D. R. Battles and K. Schmidt-Nielsen. 1976. Energy expenditure for thermoregulation and locomotion in emperor penguins. *Am. J. Physiol.* 231:903-912.
6. Pinshow, B., M. A. Fedak and K. Schmidt-Nielsen. 1977. Terrestrial locomotion in penguins: it costs more to waddle. *Science* 195:592-594.
7. Pinshow, B. and W. R. Welch. 1980. Winter breeding in emperor penguins: a consequence of the summer heat? *Condor* 82:159-163.
8. Degen, A. A., B. Pinshow, P. U. Alkon and H. Arnon. 1981. Tritiated water for estimating total body water and water turnover rate in birds. *J. Appl. Physiol. Respirat. Environ. Exercise Physiol.* 51:1183-1188.
9. Degen, A. A., B. Pinshow and P. U. Alkon. 1982. Water flux in chukar partridges and a comparison with other birds. *Physiol. Zool.* 71:55-64.
10. Pinshow, B., M. H. Bernstein, G. L. Lopez and S. Kleinhaus. 1982. Regulation of brain temperature in pigeons: Effects of corneal evaporation. *Am. J. Physiol.* 242:R577-R581.
11. Thomas, D. H., A. A. Degen and B. Pinshow. 1982. Do desert partridges have functional salt glands? Absence of nasal secretion in salt loaded sand partridges and chukars (*Ammoperdix heyi* and *Alectoris chukar sinaica*). *Physiol. Zool.* 55:323-326.
12. Alkon, P. U., B. Pinshow and A. A. Degen. 1982. Seasonal water turnover rates and total body water volumes in desert chukar partridges. *Condor* 84:332-337.
13. Afik, D. and B. Pinshow. 1982. Notes on the breeding biology of the Arabian Warbler (*Sylvia leucomelaena*) in the Arava (Rift Valley), Israel. *Ibis* 126:82-89.
14. Frumkin, R. and B. Pinshow. 1983. Notes on the breeding ecology and distribution of the sooty falcon, *Falco concolor*, in Israel. *Ibis* 125:251-259.
15. Pinshow, B., A. A. Degen and P. U. Alkon. 1983. Water intake, existence energy, and responses to water deprivation in the sand partridge (*Ammoperdix heyi*) and the chukar (*Alectoris chukar*): two phasianids of the Negev desert. *Physiol. Zool.* 56:281-289.
16. Degen, A. A., B. Pinshow and P. U. Alkon. 1983. Summer water turnover rates on free-living chukars and sand partridges in the Negev Desert. *Condor* 85:333-337.
17. Thomas, D. H., B. Pinshow and A. A. Degen. 1984. Renal and lower intestinal contributions to the water economy of desert dwelling phasianid birds: Comparison of wild and captive chukars and sand partridges. *Physiol. Zool.* 57:128-136.
18. Degen, A. A., B. Pinshow and P. J. Shaw. 1984. Must Desert Chukars (*Alectoris chukar*) drink water? Water influx and body mass changes in response to dietary water proportional content. *Auk* 101:47-52.
19. Kleinhaus, S., B. Pinshow, M. H. Bernstein and A. A. Degen. 1985. Brain temperature in heat stressed, water deprived desert phasianids: sand partridge (*Ammoperdix heyi*) and chukar (*Alectoris chukar*). *Physiol. Zool.* 58:105-116.
20. Alkon, P. U., B. Pinshow, A. A. Degen and P. J. Shaw. 1984. Phenology, diet and water turnover rates in desert chukars. *J. Arid. Environ.* 9:51-61.
21. Bernstein, M. H., H. L. Duran and B. Pinshow. 1984. Extrapulmonary gas exchange enhances brain oxygen in pigeons. *Science* 226:564-566.



22. Pinshow, B., M. H. Bernstein and Z. Arad. 1985. Effects of temperature and CO<sub>2</sub>, on O<sub>2</sub> affinity of pigeon blood: implications for brain O<sub>2</sub> supply. *Am. J. Physiol.* 249:R758-R764.
23. Levgoren, M., A. A. Degen, B. Pinshow and Y. Golan. 1986. Dietary salt tolerance in sand partridges and chukars. *Physiol. Zool.* 59:123-126.
24. Frumkin, R., B. Pinshow and Y. Weinstein. 1986. Metabolic heat production and evaporative heat loss in desert phasianids: chukar and sand partridge. *Physiol. Zool.* 59:592-605.
25. Carmi-Winkler, N., A. A. Degen and B. Pinshow. 1987. Seasonal time- energy budgets of free-living chukars (*Alectoris chukar*) in the Negev desert. *Condor* 89:594-601.
26. Yosef, R. and B. Pinshow. 1988. Nestling transfer in the Northern Shrike, *Lanius excubitor*. *Auk* 105:580-581.
27. Yosef, R. and B. Pinshow. 1988. Polygyny in the Northern Shrike, *Lanius excubitor*, in Israel. *Auk* 105:581-582.
28. Abramsky, Z. and B. Pinshow. 1989. Changes in foraging effort in two gerbil species correlate with habitat type and intra- and interspecific activity. *Oikos* 56:43-53.
29. Yosef, R. and B. Pinshow. 1989. Cache size in shrikes influences female mate choice and reproductive success. *Auk* 106:418-421.
30. Mitchell, W. A., Z. Abramsky, B. P. Kotler, B. Pinshow and J. S. Brown. 1989. The effect of intra- and interspecific competition on foraging effort: theoretical development and a test with granivorous desert rodents in Israel. *Ecology* 71:844-854.
31. Degen, A. A., B. Pinshow and M. Ilan. 1990. Seasonal water and electrolyte budgets in free-living fat sand rats feeding solely on saltbush. *J. Arid Environ.* 18:59-66.
32. Abramsky, Z., M. L. Rosenzweig, B. Pinshow, J. S. Brown, B. Kotler and W. A. Mitchell. 1990. Habitat selection: an experimental field test with two gerbils. *Ecology* 71:2358-2369.
33. Abramsky, Z., M. L. Rosenzweig and B. Pinshow. 1991. The shape of a gerbil isocline: an experimental field study using principles of optimal habitat selection. *Ecology* 72:329-240.
34. Yosef, R., W. A. Mitchell and B. Pinshow. 1991. Proximate costs and benefits of polygyny to the northern shrike. *Wilson Bull.* 75:146-149.
35. Ward, D. and B. Pinshow. 1991. Monitoring starvation risk in greenfinches: a place for physiology in foraging ecology. *Behav. Ecol.* 2:360-361.
36. Carmi, N., B. Pinshow, W. P. Porter and J. Jaeger. 1992. Water and energy limitations on flight duration in small migrating birds. *Auk* 109:268-276.
37. Degen, A. A., B. Pinshow and M. Kam. 1992. Field metabolic rates and water influxes of two sympatric Gerbillidae: *Gerbillus allenbyi* and *Gerbillus pyramidum*. *Oecologia* 90:586-590.
38. Degen, A. A., B. Pinshow, R. Yosef, M. Kam and K. A. Nagy. 1992. Energetics and growth rate of northern shrike (*Lanius excubitor*) nestlings. *Ecology* 73:2273-2294.
39. Afik, D. and B. Pinshow. 1993. Temperature regulation and water economy in desert wolves. *J. Arid. Environ.* 24:197-203
40. Hinsley, S. A., P. N. Ferns, D. H. Thomas and B. Pinshow. 1993. Black-bellied sandgrouse and pin-tailed sandgrouse: closely related species with differing bioenergetic adaptations to arid zones. *Physiol. Zool.* 66:20-42.
41. Pinshow, B. 1993. The fat sand rat: a quintessential desert rodent. *J. Basic Clin. Physiol. Pharmacol.* 4:5-12. Invited Review.
42. Carmi, N., B. Pinshow, M. Horowitz and M. H. Bernstein. 1993. Birds conserve plasma volume during thermal and flight-incurred dehydration. *Physiol. Zool.* 69:829-846.
43. Prange, H. D. and B. Pinshow. 1994. Thermoregulation of an unusual grasshopper in a desert environment: the importance of food source and body size. *J. Therm. Biol.* 19:75-78.
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114. Pinshow, B. 2005. Plasma volume maintenance during long distance flight in birds vs. plasma volume maintenance in desert mammals: different origins for analogous traits Abstracts of the annual meeting of the Society of Integrative and Comparative Biology p 208 54.1.
115. Wojciechowski, M; R. Yosef, R and B. Pinshow. 2005. Body composition of small migrating birds at a stopover site in southern Israel. *Int. Comp. Biol.* 44:666.
116. Tracy, C.R., McWhorter, T.J., Wojciechowski, M.S., Korine, C., Karasov, W.H. and Pinshow, B. 2006. Relatively low paracellular absorption in a reptile, the Egyptian mastigure, *Uromastyx aegyptius*. *Integrative and Comparative Biology* 45(6), 1203.
117. Tracy, C.R., M.S. Wojciechowski, T.J. McWhorter, R. Yosef, R., W.H. Karasov and B. Pinshow. 2006. Carbohydrate absorption in migrating blackcaps, upon arrival and after refeeding, at a stopover in southern Israel. *Integ. Comp. Biol.* 45(6), 1085.
118. Tracy, C.R., McWhorter, T.J.; Korine, C.; Pinshow, B. and Karasov, W.H. 2006. A mystery solved: how the Egyptian fruit bat absorbs sugar. *Integ. Comp. Biol.* 45(6), 1085.
119. Wojciechowski, M.S., Yosef, R. and Pinshow, B. 2006. Migrating Blackcaps use torpor during refueling at stopover in Eilat, Israel. Abstract 196 of the International Ornithological Congress. Hamburg 13-19 August 2006.
120. Pinshow B., Wojciechowski, M.S., Yosef, R., and Korine, C. 2006. Patterns of change in body composition of small migrating birds staging in Eilat, Israel. Abstract H17 of the International Ornithological Congress. Hamburg 13-19 August 2006.
121. Korine, C., Mazeh, S., Pinshow, B., and Dudley, R. 2006. The effect of ethanol odor and ethanol ingestion on food choice and food intake in the Yellow-vented Bulbul. Abstract H22 of the International Ornithological Congress. Hamburg 13-19 August 2006.
122. Wojciechowski, M.S., Tracy, C.R., McWhorter, T.J., Yosef, R., Karasov, W.H., and Pinshow, B. 2006. Blackcaps at migratory stopovers compensate for reduced gut with increased paracellular nutrient uptake. Abstract H34 of the International Ornithological Congress. Hamburg 13-19 August 2006
123. Palgi, N. and B. Pinshow. 2006. Oxalate Balance In Fat Sand Rats Feeding On A Calcium Rich Diet. American Physiological Society Intersociety Meeting: Comparative Physiology 2006: Integrating Diversity. Abstracts of Invited and Volunteered Presentations 7.35.
124. Sánchez , F., B.P. Kotler, C. Korine and B. Pinshow. Ethanol and sugars as complementary resources to Egyptian fruit bats, *Rousettus aegyptiacus*. *Comparative Biochemistry and Physiology, Part A* 146 (2007) S171-S188. Won prize for best general biology poster Society of Experimental Biology, Glasgow 2007.
125. Wojciechowski, M. S., M. Jefimow and Berry Pinshow. 2008. Blackcaps huddle at night at migratory stopovers. Abstracts of the 13th International Hibernation Symposium. 6-12 August. Swakopmund, Namibia.
126. Aamidor, S. E, U. Bauchinger and B. Pinshow, 2009. Does dietary protein limit mass gain in migrating blackcaps refueling at stopovers? Abstract P1.109. Society of Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
127. Amitai, O., U. Bauchinger., M.D McCue and B. Pinshow. 2009. The effects of dietary (n-3) and (n-6) oils on basal metabolic rate in zebra finches. Abstract P1.110. Society of Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
128. Mizrahy, O., U. Bauchinger and B. Pinshow. 2009. Water availability is not a bottle-neck to rebuilding fat stores in insect-eating, migrating blackcaps. Abstract P1.147. Society of

- Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
129. Burns, D. J., U. Bauchinger, S. Mukherjee and B. Pinshow. 2009. Physiological and behavioral responses of molting house sparrows to protein stress. Abstract 50.6. Society of Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
  130. Korine, C., S. Daniel and B. Pinshow. 2009. Frugal energy use by Hemprich's long-eared bats (*Otonycteris hemprichii*) during pregnancy and nursing. Abstract P3.146. Society of Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
  131. Wojciechowski, M. S.; M. Jefimow and Berry Pinshow. 2009. Blackcaps use torpor and huddle while resting at a stopover site during migration. Abstract 91.1. Society of Integrative and Comparative Biology annual meeting, 3-7/1/09, Boston, MA.
  132. Ben-Hamo, M, U. Bauchinger and B. Pinshow. 2009. A reassessment of proximate factors that trigger hypothermia in Japanese quail. Integrative and Comparative Biology 50:E10.
  133. Gutowski, J., M. Miesikowski, A. Dubicki, M. Sommery and B. Pinshow. 2009. The effect of temperature on the walking speed of the European ant *Formica rufa*. Poster presented at the XLIX Evolutionary Biology Workshop (XLIX Warsztaty Biologii Ewolucyjnej), main topic: Insects Communities, 21 November 2009, Department of Biology, Warsaw University.
  132. Pinshow. B. 2009. Water balance in desert mammals and in flying birds: multiple vs. single evolutionary paths to the same physiological end. Plenary Lecture. Australia and New Zealand Society of Comparative Physiology and Biochemistry. Deakin University, Geelong Victoria. 27-29 November 2009.
  132. Pinshow. B. 2009. Water balance in desert mammals and in flying birds: multiple vs. single evolutionary paths to the same physiological end. Plenary Lecture. Australia and New Zealand Society of Comparative Physiology and Biochemistry. Deakin University, Geelong Victoria. 27-29 November 2009.
  133. Korine, C., B. R. Krasnov, I. S. Khokhlova and B. Pinshow. 2010. Feeding ability of the flea *Xenopsylla ramesis* on three hosts that differ in life history. 2nd International Berlin Bat Meeting: Bat *biology and infectious diseases*. 19-21 February 2010.
  134. Mizrahy, O., Ben-Hamo, M., Bauchinger, U. and Pinshow, B (2010). The effects of water availability on tissue rebuilding in migratory blackcaps during stopover. Integrative and Comparative Biology 50:E269.
  135. McCue, M. S. McWilliams and B. Pinshow 2010. Ontogeny and nutritional status influence oxidative kinetics of exogenous nutrients and whole animal bioenergetics in zebra finches. Abstract 12.21. APS Intersociety Meeting: Global Change and Global Science: Comparative Physiology in a Changing World August 4-7, 2010 Westminster, Colorado.
  136. McCue, M. S. McWilliams and B. Pinshow 2010. Using stable isotopes to track exogenous nutrient allocation and routing in postprandial house sparrows. Abstract 12.20. APS Intersociety Meeting: Global Change and Global Science: Comparative Physiology in a Changing World August 4-7, 2010 Westminster, Colorado.
  137. Pinshow, B., S. Aamidor and O. Mizrahy. 2010. Do dietary protein and access to drinking water limit body mass increase in migrating passerine birds refueling at a stopover? Symposium presentation at the 25<sup>th</sup> International Ornithological Congress, 22-28 August, Campos do Jordão, Brazil.
  138. McCue, M.D., O. Sivan, S.R. McWilliams and B. Pinshow 2010. Tracking the oxidative kinetics of carbohydrates, amino acids, and fatty acids in the house sparrow using exhaled <sup>13</sup>CO<sub>2</sub>. Integrative and Comparative Biology 50:E112.
  139. Ben-Hamo M., Pinshow B., McWilliams S. R. and Bauchinger U. (2010). Fasting triggers hypothermia, and ambient temperature modulates its depth in Japanese quail

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- Coturnix japonica. Presented at the Society for Integrative and Comparative Biology Conference, January, 4, 2010 in Seattle, WA.
140. Ben-Hamo, M.; McCue, M. D.; McWilliams, S. R. and Pinshow, B. 2011. Dietary fatty acid composition influences tissue lipid profiles and regulation of body temperature, but not metabolic rates, of hypothermic Japanese quail. *Integrative and Comparative Biology* 51:E165.
  141. Muñoz-Garcia, A., Aamidor, S., McCue, M., McWilliams, S. and Pinshow, B. 2011. Abstract 77.2. Allocation of endogenous and dietary protein in the reconstitution of the gastrointestinal tract in migratory blackcaps, *Sylvia atricapilla*, at stopover sites *Comparative Biology* 51:E98.
  142. Pinshow, B; Aamidor, S; Mizrahy, O; McWilliams, S.R. and Bauchinger, U. 2011. The effects of dietary protein and water availability on mass gain in passerine birds refueling during migration. *Integrative and Comparative Biology* 51:E109.
  143. Wojciechowski, M. S., M. Jefimow and B. Pinshow. 2011. Hypothermia in small migrating passerines. What can bats teach us about bird migration? *Integrative and Comparative Biology* 51:E153.
  144. Korine, C., F. Sánchez and B. Pinshow. 2011. Ethanol Increase Food Consumption in summer but not in winter: Effects of Ethanol Consumption on Skin Temperature of the Egyptian Fruit Bats. *Integrative and Comparative Biology* 51:E72.
  145. Brickner-Braun, I. and B. Pinshow. 2011. Semi-fossorial rodents may not pay an energetic cost for their ability to tolerate high burrow  $PCO_2$ . *FASEB J.* 25:858.14.
  146. Brickner-Braun, I. I. Vatnick and B. Pinshow. 2011. The oxy-hemoglobin dissociation curve of a semi-fossorial rodent in the context of its burrow's hypercapnic environment. The oxy-hemoglobin dissociation curve of a semi-fossorial rodent in the context of its burrow's hypercapnic environment *FASEB J.* 25:1045.2.
  147. Khalilieh, A. S., M. D. McCue and B. Pinshow 2011. Birds unadapted to prolonged fasting may not follow the mass loss pattern characteristic of fasting-adapted species *FASEB J.* 25:859.6.
  148. Zucker-Milwenger, D., I. Brickner-Braun, P. Berliner, J.S. Turner and B. Pinshow. 2012. Gas exchange in rodent burrows depends on transient, turbulent air flow and eddies at the ground surface. *Society of Experimental Biology Abstract Book.* A 13.94.
  149. Ben-Hamo, M. and B. Pinshow. Waking to drink: rates of evaporative water loss determine arousal frequency in hibernating bats. Abstract SA463. Congress of the International Union for Physiological Sciences. Birmingham, U.K. 21-26 July 2013.
  150. Pinshow, B. D. Zucker, I. Brickner-Braun, J. Scott Turner and Pedro Berliner. 2014. Rodent burrow ventilation: boundary layer turbulence induces penetration of eddies into burrows. Abstract 88.3. Society for Integrative and Comparative Biology Annual Meeting Abstracts.
  151. Turner J. S. and B. Pinshow. On transient-state ventilation of burrows with a single opening. Abstract 88.3. Society for Integrative and Comparative Biology Annual Meeting Abstracts.
  152. Walcek, A; B. Pinshow and C. Korine. 2014. Respiratory and Cutaneous Water Loss in Egyptian Fruit-bats (*Rousettus aegyptiacus*) Abstract P3.87. Society for Integrative and Comparative Biology Annual Meeting Abstracts.
  153. Adams, A. M., J. S. Turner, P. Berliner, and B. Pinshow. 2015. The burrows of distantly related scorpions are very similar in architecture. Society for Integrative and Comparative Biology. West Palm Beach, FL. 3-7/1/15. Abstract P2-55.
  154. Khalilieh, A., M. D. McCue and B. Pinshow. 2015. House sparrows have two phases of fuel use during fasting, rather than the classic three. Society for Integrative and Comparative Biology. West Palm Beach, FL. 3-7/1/15. Abstract P1-154.

155. Pinshow, B., A. M. Adams, J. S. Turner and P. Berliner. 2015 Animal Burrow Ventilation – New Ideas about Ancient Phenomena. 9<sup>th</sup> International Congress of Comparative Physiology and Biochemistry. 12-28 August 2015. Abstract 0.30.2.

### **XIII. CONFIDENTIAL TECHNICAL REPORTS -**

1. Faiman, D. and B. Pinshow. 1978. A universal solar panel: some preliminary performance tests. Institute for Desert Research, Ben-Gurion University.
2. Pinshow, B. and R. Frumkin. 1991. Bird Migration Survey, autumn 1991. Annual report to TOMER Management.
3. Pinshow, B. and R. Frumkin. 1992. Bird Migration Survey, spring 1992. Annual report to TOMER Management.
4. Pinshow, B. and R. Frumkin. 1992. Bird Migration Survey, autumn 1992. Annual report. TOMER Management.
5. Pinshow, B. and R. Frumkin. 1992. Bird Migration in the Arava and The Voice of America Relay Station. September 1992. Final Report to TOMER Management and the Israel National Committee for Planning and Building.

### **XIV. TRANSLATING AND EDITING**

- \* Raveh, D. and B. Pinshow (eds.) 1980. Animal Science Laboratory Manual. Selections translated from S. Vogel and K. C. Ewel., *A Model Menagerie*, Addison-Wesley, Reading, Mass. 1972 and from S. Vogel and S. A. Wainwright., *A Functional Bestiary*, Addison-Wesley, Reading, Mass. 1969.

### **XV. POPULAR PUBLICATIONS**

- Markovsky, Y. and B. Pinshow. 1984. The Saharan sand viper: a snake of the moving sands. *Int. Zoo. News* 31:5-6-11.
- Markovsky, Y. and B. Pinshow. 1984. The Saharan sand viper: a snake of the moving sands. *Israel Land and Nature* 24:250-253 (Hebrew)
- Pinshow, H. and B. Pinshow. 1987. The Emperor Penguin: deep-freeze survival. *Masa Aher* 1:4-14 (Hebrew)
- Frumkin, R. and B. Pinshow. 1999. Bird banding in the Hatzeva region. *The Torgos* 28:41-45.
- Ben-Hamo M. and B. Pinshow (2010). Physiological adaptations of desert birds. *Galileo*, 143- July 2010 (Hebrew).

### **XVI. STUDENTS AND POST-DOCTORAL TRAINEES (not including high school and undergraduate project advisees)**

1. M.Sc. Shani Kleinhaus. Brain temperature regulation in chukar and sand partridges in the heat. BGU Biology Department 1980 - 1983.
2. M.Sc. Rafael Frumkin. Acid - base regulation in chukar and sand partridges in the heat. 1980 - 1983.
3. M.Sc. Yosef Linder. Metabolic rate of psammophilous gerbil species in the field and in captivity. BGU Biology Department 1985 - 1989
4. M.Sc. Reuven Yosef. Energy and water balance in the great gray shrike. BGU Biology Department 1986 - 1989
5. M.Sc. Daniel Afik. Water and energy use in captive and free-living wolves. BGU Biology Department 1986 - 1989.
6. M.Sc. Orit Pasternak-Lam. Winter territoriality in individual Stonechats. BGU Biology Department 1993-1995.
7. M.Sc. Gilead Michaeli. Exhaled air temperature in free-flying pigeons. BGU Dept. of Life

- Sciences 1994 - 1998.
8. M.Sc. Itamar Giladi. Kidney function and body fluid composition in free-flying pigeons. BGU Dept. of Life Sciences 1994 -1998.
  9. M.Sc. Smadar Atsmon. Plasma volume maintenance in birds. BGU Dept. of Life Sciences 1995 - 1999.
  10. M.Sc. Sagi Nave-Marom. BGU Albert Katz School for Desert Studies. 2001-2004. Metabolic heat production and evaporative water loss in two desert bats, *Tadarida teniotis* and *Otonycteris hemprichii*. Ben-Gurion University of the Negev. In English.
  11. M.Sc. Shunit Mazeh. BGU Albert Katz School for Desert Studies. 2002 -2005
  12. M.Sc. Efrat Elimelech. BGU Dept. of Life Sciences 2002 - 2005. The effect of food availability on the prey-capture method used by antlion larva, *Myrmecaelurus* sp. (Neuroptera, Myrmeleontidae)
  13. M.Sc. Aviad Horev. BGU Albert Katz School for Desert Studies. 2003 - 2005
  14. M.Sc. Yoav Perlman. BGU Albert Katz School for Desert Studies. 2005 - 2007. "Foraging ecology, body temperature patterns and space use characteristics of the Nubian Nightjar, *Caprimulgus nubicus*, in Israel
  15. M.Sc. Darren Burns. BGU Albert Katz School for Desert Studies. 2006 - 2009
  16. M.Sc. Sarah Aamidor. BGU Albert Katz School for Desert Studies. 2007- 2010
  17. M.Sc. Ortal Mizrahy. BGU Albert Katz School for Desert Studies. 2007- 2009
  18. M.Sc. Oren Amitai BGU Dept. of Life Sciences. October 2007- 2010
  19. M.Sc. Khalilieh, Anton. BGU Albert Katz School for Desert Studies. October 2009- 2011
  20. M.Sc. Paloma Larrain. BGU Albert Katz School for Desert Studies. October 2009 - current
  21. M.Sc. Daniel Zucker. Albert Katz School for Desert Studies. October 2010 - 2013
  22. M.Sc. Shlomi Aharon. Albert Katz School for Desert Studies. March 2011 - incomplete
  23. M.Sc. Cassandra Gearhart. Albert Katz School for Desert Studies. October 2012 - 2015
  24. M.Sc. Amelia Walcek. Albert Katz School for Desert Studies. October 2012 - 2015
  25. Ph.D. Miri Ben-Hamo. BGU Albert Katz School for Desert Studies. October 2009- 2014
  26. Ph.D. Nurit Carmi-Winkler. Is dehydration a limiting factor to the distance flown by birds? BGU Biology Department 1987 - 1993.
  27. Ph.D. David Yekutieli. Physiological condition of migrating birds after long distance flight. BGU Biology Department 1991 - 1993, incomplete.
  28. Ph.D. Ofer Ovadia. Physiological ecology of two gerbil species. 1993 - 2000. BGU Dept. of Life Sciences. Clore Scholar.
  29. Ph.D. Ayal Shochat. Bird populations in KKL afforested areas. BGU Dept. of Life Sciences 1994 - 2000.
  30. Ph.D. Lizanne Roxburgh. - Nitrogen excretion in nectarivorous birds: are sunbirds (*Nectarinia osea*) facultatively ammonotelic? BGU Dept. of Life Sciences 1995 - 2000
  31. Ph.D. Shai Markman. BGU Dept. of Life Sciences 1995 - 2002. Parental investment: the trade-off between feeding oneself and attending to one's offspring in the Palestine sunbird. (*Nectarinia osea*).
  32. Ph.D. Leonard Gannes, Ecology and Evolutionary Biology, Princeton University (External adviser), 1995 - 1998.
  33. Ph.D. Virginie Canoine, Territoriality in Stonechats (endocrinology). Max-Planck Institute, Andechs (external adviser).
  34. Ph.D. Shai Daniel, Bat physiological ecology BGU Dept. of Life Sciences. 2000 - 2006. Roost selection, thermoregulatory behavior and foraging activity in a desert dwelling bat, *Otonycteris hemprichii*, during the reproductive period. In English
  35. Ph.D. Francisco Sánchez. BGU Kreitman School - Multidisciplinary program. Mitrani Dept. of Desert Ecology. 2003 - 2008. The effects of ethanol in food on the foraging behavior of Egyptian fruit bats.

36. Ph.D. Niv Palgi. BGU Dept. of Life Sciences 2003 - 2008
37. Ph.D. Inbal Brickner-Braun. BGU Kreitman School - Multidisciplinary program. 2007-2014.
38. Ph.D. Khalilieh, Anton. BGU Albert Katz School for Desert Studies. October 2012 - current
39. Post-doc. Michael A. Fedak 1973-1974 (NSF funding). I was simultaneously Dr. Fedak's first graduate student.
40. Post-doc. William Mitchell 1986-1988 (The Blaustein Fellowship) (Prof. Indiana State Univ.)
41. Post-doc. David Ward. 1988 - 1989 (The Blaustein Fellowship) (Prof. Univ. Kwa-Zulu Natal, Pietermaritzburg)
42. Post-doc. Shani Kleinhaus. 1991 - 1992 (BIC funding), 1992 - 1994 (Wolf Fellow) (Spokesperson for Nature Conservancy, California)
43. Post-doc. Ron Frumkin. 1991 - 1993 (VOA project) (Environmental Impact - freelancer)
44. Post-doc. Nigel Adams. 1992 - 1994 (The Blaustein Fellowship) (Prof. Unitec, New Zealand)
45. Post-doc. Robyn Delaney. 1994 -1995 (Hebrew U. funding)
46. Post-doc. Kent Hatch. 1997 - 1998 (Fulbright Post-doctoral Fellow) (Assist. Prof. Univ. of Long Island)
47. Post-doc. Ian van Tets. 1999 - 2002 (BCSC and ISF funding) (Assoc. Prof. Univ. of Alaska)
48. Post-doc. Carmi Korine. 1999 - 2001 (BCSC funding) (Director, Ramon Science Center)
49. Post-doc. Mikhail Markovets. 1 March 2003 - 2004 (IBRC, Eilat funding) (Rybachy Bird Research Institute, Russia)
50. Post-doc. Michał Wojciechowski. 2003 - 2005 (BCSC funding) (Lecturer, Nicolas Copernicus University)
51. Post-doc. Christopher R. Tracy. 2004 - 2005 (BCSC and UW funding) (declined The Blaustein Fellowship) (Visiting Scientist, Darwin University)
52. Post-doc. Joelle Gouy de Bellocq March 2004 - March 2005 with Dr. Boris Krasnov (BCSC and VATAT Funding). (Lecturer, University of Antwerp)
53. Post-doc. Ulf Bauchinger. September 2006-September 2008 (The Blaustein Fellowship) (Post-doctoral fellow, University of Rhode Island)
54. Post-doc. Marshal McCue July 2008 - 2010 (The Blaustein Fellowship and VATA support) (Assistant Professor, St. Mary's University, San Antonio)
55. Post-doc. Agusti Muñoz Garcia, January 2009 - 2011 (The Blaustein Fellowship and VATAT support).
56. Post-doc. Cynthia Downs, August 2011 - November 2012 (The Blaustein Fellowship)
57. Post-doc. Amanda M. Adams. September 2013 – June 2015 (Supported by BCSC, the Kreitman School and ISF grant 136/10)

**XVII. PAPERS\*, ABSTRACTS<sup>#</sup> AND GRANT PROPOSALS<sup>@</sup> SUBMITTED\* and in prep\*\*.**

- \*\* McWhorter, T. J., J. E. Schondube, S. W. Nicolson, B. Pinshow, C. M. del Rio<sup>6</sup>, and P. A. Fleming. Convergence in digestive capacity in nectar-feeding birds. In preparation.
- \* Brickner-Braun, I., I. Vatnick, C. J. Downs and B. Pinshow. Sundevall's jirds tolerate high inspired  $F_{CO_2}$ , but pay an energetic cost. Submitted to the *Journal of Experimental Biology*. 12-7-16.
- \*\* Ben-Hamo, M., A. Muñoz-García<sup>1</sup>, P. Larrain, B. Pinshow, C. Korine, and J. B. Williams. Cutaneous lipid composition and water loss in bats.

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\* Adams, A.M., E. Marais, J.S. Turner, L. Prendini and B. Pinshow. Similar burrow architecture of three arid-zone scorpion species implies similar ecological function. *Oikos*. Submitted 12-10-15.

### **XVIII. REVIEWING EXPERIENCE**

*Auk*

*American Journal of Physiology - Regulatory, Integrative and Comparative Physiology*

*Australian Journal of Zoology*

*Behavioral Ecology*

*Biology Letters*

*Condor*

*Comparative Biochemistry and Physiology (member of editorial board)*

*Ecology*

*Functional Ecology*

Germany - Israel Binational Science Foundation (grant proposals)

*Ibis*

*Israel Journal of Zoology*

Israel Ministry of Science (grant proposals)

Israel Science Foundation (grant proposals)

*Journal of Animal Ecology*

*Journal of Arid Environments*

*Journal of Experimental Biology*

*Journal of Comparative Physiology*

*Journal of Ornithology*

*Journal of Theoretical Biology*

*Journal of Thermal Biology*

National Research Foundation, South Africa (grants, personnel research output evaluations)

Natural Environment Research Council, UK (grant proposals)

Natural Sciences and Engineering Research Council of Canada (grant proposals)

Netherlands Organization for Scientific Research (NWO, the Dutch research council)

*Oecologia-Ornis Scandinavica*

*Physiological and Biochemical Zoology (member of editorial board)*

*Science*

United States - Israel Binational Science Foundation (grant proposals)

United States National Science Foundation (grant proposals)

*The Wilson Journal of Ornithology*

*Zoology (Elsevier)*

### **XIX SCIENTIFIC MEETINGS ATTENDED.**

1973 American Physiological Society, FASEB, Atlantic City

1974 American Physiological Society, FASEB, Atlantic City

1974 Third SCAR Symposium on Antarctic Biology, Washington, D. C.

1975 American Physiological Society, FASEB, Atlantic City

1977 American Physiological Society, FASEB, Chicago

1977 International Congress of Physiological Science, Paris

1978 The Zoological Society of Israel, Jerusalem

1978 8th International Congress of Biometeorology, Shefayim, Israel

1978 Second International Congress of Ecology, Jerusalem

1979 The Zoological Society of Israel, Beer Sheva

1980 XXVII International Congress of Physiological Sciences, Budapest

1980 The Zoological Society of Israel, Haifa

1981 The Zoological Society of Israel, Jerusalem  
 1982 The Zoological Society of Israel, Tel Aviv  
 1982 American Physiological Society, FASEB, New Orleans  
 1984 American Physiological Society, FASEB, St. Louis  
 1984 International Union of Physiological Sciences, Regional Meeting, Jerusalem  
 1984 The Zoological Society of Israel, Seminar Oranim, Israel  
 1985 The Zoological Society of Israel, Sede Boqer Campus, Israel  
 1986 The European Society of Comparative Physiology and Biochemistry, Strasbourg, France  
 1987 American Physiological Society Spring Meetings, Washington, DC  
 1987 American Physiological Society Fall Meetings, San Diego, CA.  
 1990 American Physiological Society Spring Meetings, Washington, DC  
 1990 American Physiological Society Fall Meetings, Orlando, Florida.  
 1991 British Trust for Ornithology: Ecology and Conservation of Palearctic-African migrants.  
 Norwich, England.  
 1991 American Society of Zoologists annual meeting. Atlanta, Georgia.  
 1992 International Workshop on Avian Interactions with Utility Structures. 13-15 September,  
 Miami, Florida. US Electric Power Research Institute.  
 1993 Towards predictive models of bird migration: theoretical and empirical bottlenecks.  
 International Workshop, IBN & NIOZ, Texel, Netherlands, 7-9 July 1993. Working group  
 leader - Energy and water budgets.  
 1994 International Conference on Bird Migration, SPNI, Eilat, Israel, April 3-7, 1994.  
 1994 XXI International Ornithological Congress, Vienna. August 20-15, 1994.  
 1994 American Physiological Society -Intersociety Meeting. Regulation, Integration,  
 Adaptation: A Species Approach. October 29-November 2, 1994, San Diego, CA.  
 1995 American Ornithologists' Union. 113th Stated Meeting, 15-19 August 1995, Cincinnati,  
 Ohio.  
 1996 Federation of American Societies of Experimental Biology. 14-17 April 1996,  
 Washington, DC.  
 1996. Israel Society for Physiology and Pharmacology. Annual Meeting at Ma'ale Hachamisha,  
 31-10-96.  
 1996 Society of Integrated and Comparative Biology, 26 - 30 December, Albuquerque, NM.  
 1997. FASEB April 6-9 New Orleans, Louisiana  
 1997 28th Annual meeting of the Israel Society for Ecology and Environmental Sciences, Haifa  
 University, June 16-17, 1997.  
 1997 The International Conference on Comparative Physiology and Biochemistry, 31/8-5/9  
 1997. Skukuza, South Africa.  
 1998 Society for Integrative and Comparative Biology. Annual Meeting. January 3 - 7, 1998.  
 Boston.  
 1998 International Ornithological Congress. 16-22 August, Durban, South Africa  
 1999 Society for Integrative and Comparative Biology. Annual Meeting. January 6-10, Denver.  
 1999 Federation of American Societies of Experimental Biology. 17-21 April 1999.  
 Washington, DC.  
 1999 International Workshop: Dryland Biodiversity. 27 June - 2 July 1999. BGU.  
 1999 Annual Meeting of Israel Society for Physiology and Pharmacology 6-7/10/1999, Ma'ale  
 Hahamisha.  
 1999 The Zoological Society of Israel. 5/12/99. Tel Aviv University.  
 2000 Federation of American Societies of Experimental Biology. April 13-19, 2000 San. Diego,  
 CA.  
 2000 Experimental Biology 2000: Milestones and goals. Cambridge, England, 29 July - 3  
 August 2000.

- 2001 International Conference of Comparative Physiology and Biochemistry "How animals work" Kasane, Botswana 18-24 August 2001.
- 2001 Society for Integrative and Comparative Biology. Annual Meeting. January 3-7, Chicago.
- 2001 Annual Meeting of Israel Society for Physiology and Pharmacology 18/10/2001, Ma'ale Hahamisha.
- 2002 Society for Integrative and Comparative Biology, Anaheim CA 3-7 January 2002.
- 2002 American Physiological Society. The Power of Comparative Physiology. San Diego CA, 26-29 August.
- 2002 The Zoological Society of Israel. 1/12/2002. Tel Aviv University.
- 2003 FASEB. 11-15 April. San Diego CA.
- 2003 The Israel Zoological Society. Ben-Gurion University.
- 2004 Society for Integrative and Comparative Biology, New Orleans, LA 3-7 January 2004.
- 2004 Federation of American Societies of Experimental Biology. April 2004. Washington, DC.
- 2004 International Conference of Comparative Physiology and Biochemistry in Africa "How animals work" Ithala, KwaZulu-Natal 7-13 August.
- 2005 Federation of American Societies of Experimental Biology. April 2005. San Diego, CA.
- 2005 International Union of Physiological Sciences. March-April 2005. San Diego, CA.
- 2006 Federation of American Societies of Experimental Biology. April 2006. San Francisco, CA.
- 2006 International Ornithological Congress. August 2006, Hamburg, Germany.
- 2007 Society for Integrative and Comparative Biology.
- 2007 The Zoological Society of Israel. 12/2008. Achva College.
- 2008 Society for Integrative and Comparative Biology. San Antonio, TX.
- 2008 13th International Hibernation Symposium. Swakopmund, Namibia. 6-12 August.
- 2009 Society for Integrative and Comparative Biology. Boston, MA. 3-7/1/09.
- 2009 Australia and New Zealand Society of Comparative Physiology and Biochemistry. Deakin University, Geelong Victoria. 27-29 November 2009.
- 2010 Federation of American Societies of Experimental Biology. April 2010. Anaheim, CA.
- 2010 International Ornithological Congress. August, Campo, Brazil.
- 2011 Society for Integrative and Comparative Biology. Salt Lake City, UT. 3-7/1/11.
- 2011 - Federation of American Societies of Experimental Biology.
- 2012 Society for Integrative and Comparative Biology. Charleston, SC. 3-7/1/12.
- 2013 Society for Integrative and Comparative Biology. San Francisco, CA. 3-7/1/13.
- 2013 The Israel Zoological Society. Tel Aviv University, 1 December.
- 2014 Society for Integrative and Comparative Biology. Austin, TX. 3-7/1/14.
- 2014 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation (PPTR), Skukuza, South Africa 7-12 September 2012. 2015
- 2015 Society for Integrative and Comparative Biology. West Palm Beach, FL. 3-7/1/15.
- 2015 9<sup>th</sup> International Congress of Comparative Physiology and Biochemistry. 12-28 August 2015. Cracow, Poland.
- 2015 Annual meeting of Israel Society of Arachnologists. Blaustein Institutes for Desert Research, Midreshet Ben-Gurion. 6-10-15.

## **XX. INVITED LECTURES**

- 1974 Technion, Haifa, Department of Physiology, School of Medicine.
- 1974 Ben-Gurion University, Beer Sheva, Department of Biology.
- 1974 Tel Aviv University, Zoology Department.
- 1975 University of New South Wales, Sydney, Zoology Department.
- 1975 Flinders University of South Australia, Adelaide, Zoology Department
- 1975 University of Wisconsin, Madison, Zoology Department.

1976 University of Minnesota, St. Paul Minnesota, Department of Biology.  
 1976 University of Wisconsin, Milwaukee, Biology Department.  
 1976 University of Wisconsin, Madison, Zoology Department.  
 1977 Department of Biology. New Mexico State University Las Cruces, NM  
 1977 Tel Aviv University, Zoology Department.  
 1978 Haifa University, Institute for Evolutionary Biology.  
 1978 Bar Ilan University, Faculty of Life Sciences.  
 1983 University of California, Los Angeles, Zoology Department.  
 1983 Department. Zoology Riverside, California, of University 19831983 University of  
 Arizona, Tucson, Department of Ecology and Evolutionary  
 1983 Colorado State University, Fort Collins, Department of Ecology and Entomology.  
 1983 Iowa State University, Ames, Iowa, Zoology Department.  
 1983 University of Wisconsin, Madison, Zoology Department.  
 1983 Princeton University, Princeton, New Jersey, Biology Department.  
 1984 Duke University, Durham, North Carolina, Department of Zoology  
 1984 University of Indiana, Bloomington, Physiology Department.  
 1984 University of Michigan, Ann Arbor, Zoology Department.  
 1984 Portland State University, Portland, Oregon, Zoology Department.  
 1985 Tel Aviv University, Zoology Department.  
 1985 Southwest Research Station, American Museum of Natural History.  
 1987 Brown University, Providence, Rhode Island, Section of Physiology and Biophysics,  
 Division of Biology and Medicine. 3 April.  
 1987 University of Wisconsin, Madison, Department of Zoology.  
 1987 Ben-Gurion University, Department of Chemical Engineering. 7 December.  
 1988 University of Michigan, Ann Arbor, Museum of Zoology and Zoology Department. 10  
 October.  
 1989 Indiana University, Bloomington, Medical Sciences Program. 18 July.  
 1989 Ohio State University, Columbus, Department of Zoology.  
 1989 University of Arizona, Tucson, Department of Ecology and Evolutionary Biology. 5  
 December.  
 1990 University of Wisconsin - Madison, Department of Zoology. 12 February.  
 1990 Indiana State University, Terre Haute, Dept. of Life Sciences. 5 March.  
 1991 Witwatersrand University, Johannesburg, South Africa, Department of Physiology, School  
 of Medicine. August.  
 1991 University of Natal, Pietermaritzburg, South Africa, Department of Zoology. August.  
 1991 University of Cape Town, Cape Town, South Africa, Percy Fitzpatrick Institute for  
 African Ornithology and Zoology Department. August.  
 1991 Swiss Ornithological Institute. Sempach, Switzerland 10 December.  
 1992 Archbold Field Station, Lake Pleasant, Florida. 15 September.  
 1992 New Mexico State University, Las Cruces, Department of Biology. 22 September.  
 1992 Indiana University, Bloomington, Medical Sciences Program. 28 September.  
 1993 Hebrew University, Jerusalem, Department of Evolution, Systematics and Ecology. 29  
 April.  
 1994 Washington University, Department of Zoology, 24 October.  
 1994 Department of Life Sciences, Ben-Gurion University, 7 December.  
 1995 Department of Zoology, Tel Aviv University, 11 January.  
 1995 Indiana University, Bloomington, Medical Sciences Program. 22 August.  
 1995 Duke University, Durham, North Carolina, Department of Zoology. 24 September.  
 1996 Israel Society of Physiology and Pharmacology, Annual Meeting, 31 October.  
 1996 Beer Sheva Jail. 23 December.



1997 Witwatersrand University Medical School, Department of Physiology. August.  
 1997 Hebrew University, Jerusalem, Department of Environmental Sciences. 11 November.  
 1997 University of Haifa at Oranim, Department of Biology. 17 December.  
 1998 Indiana University, Department of Biology. 2 October.  
 1998 New Mexico State University, Biology Department. 29 October.  
 1998 University of Arizona, Department of Ecology and Evolutionary Biology. 30 October.  
 1998 University of Florida, Gainesville, Department of Zoology. 10 November.  
 1998 White Oaks Plantation. 12 November.  
 1998 Princeton University, Department of Ecology and Evolutionary Biology, 9 December.  
 1999 Indiana University, Medical Sciences Program, 21 January  
 1999 Indiana State University, Terre Haute, Biology Department, 2 February  
 1999 Israel Society of Physiology and Pharmacology, annual Meeting, 6 October.  
 1999 The Zoological Society of Israel, annual meeting. Invited lecture. Tel Aviv University 5 December.  
 2000 Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University. 26 April.  
 2000 BGU Faculty of Health Sciences. Life Sciences Day, June 6, 2000, Invited Speaker.  
 2001 University of Illinois, Department of Biological Sciences. 9 January 2001.  
 2001 Bar Ilan University, the International Jewish Identity Center - Negev Conference 3 May.  
 2001 Max-Planck Research Center for Ornithology, Andechs, Germany. 17 May.  
 2002 Department of Zoology and Physiology, University of Wyoming, Laramie. 5 August.  
 2003 Department of Zoology, Tel Aviv University. 5 March.  
 2003 Department of Evolution, Systematics and Ecology, HUJI, 28 December.  
 2004 Indiana University, Medical Sciences Program, 29 April.  
 2005 University of San Diego, Biology Department. 31 March.  
 2005 University of Munich, Department Biologie II. 9 November.  
 2007 Department of Zoology, University Of Pretoria 9-7-07  
 2007 The University of the Witwatersrand - 17-7-07. Lecture in distinguished scientist guest program. Department of Animal, Plant and Evolutionary Sciences.  
 2009 Plenary speaker. Annual meeting of the Australian and New Zealand Comparative Physiology and Biochemistry Society. Deakin University, Geelong, Victoria, December.  
 2013 Symposium. Congress of the International Union of Physiological Sciences. 21-26 July, Birmingham, UK.  
 2013 The Zoological Society of Israel, annual meeting. Invited lecture. Tel Aviv University 1 December.  
 2014 State University of New York College of Environmental Science and Forestry. Adaptive Peaks Seminar - 9 October 2014  
 2015 Ecology Departmental Seminar, Mitrani Department of Desert Ecology. BIDR. BGU. 21 June 2015.  
 2015 Plenary Lecture. Annual meeting of Israel Society of Arachnologists. Blaustein Institutes for Desert Research, Midreshet Ben-Gurion. 6-10-15.