Curriculum Vitae

Sally Eva Silverstone

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2013- Present	Program coordinator, Lead Educator, Biosphere Stewardship Education Programs N.W. Bali. Programs designed to introduce students to ecological understanding and stewardship using a biospheric approach.
2011-Present:	Director Biosphere Association, a registered UK Charity #1145458 representing the work of Biopshere Foundation in Europe
1998 - Present	VP, Director of Agricultural and Forestry Systems, Biosphere Foundation. Assisted in the overall design of the Laboratory Biosphere in Santa Fe New Mexico. Responsible for the maintenance of life systems during the Laboratory Biosphere experiments 2001-2005. Currently Program coordinator for field projects N.W. Bali, including Research into sustainable production of dry land crops, and restoration of costal monsoon forest.
1995 - Present	CFO, Biosphere Foundation.
1996 - 2008	Project Director, Tropic Ventures Rainforest Enrichment Project at Las Casas de la Selva, Puerto Rico. Responsible for the overall management of a 1,000-acre sustainable forestry project. Including: Principle Investigator for research programs, hosting and leading teams of volunteers and researchers under the sponsorship of Earthwatch Foundation.
1993-1994	Director of Agriculture and Food Systems, Space Biospheres Ventures. Mission supervisor. Responsible for training of the operating crew for Mission 2. Space Biospheres Ventures.
1991 - 1993	Co-Captain, Biosphere 2 Crew September 26, 1991 to September 26, 1993; Director of Agriculture and Food Systems. Responsible for the daily co-ordination of crew task inside Biosphere 2 during its first two-year closure as a totally sealed, self sustaining life system. Responsible for overall management of the agriculture system

that supplied the food for the crew of eight people over the two-year period.

1987- 1991 Administrator, Architectural Division, Space Biospheres Ventures. Responsible for management and coordination of architectural division operations, financial administration and cost control for Biosphere 2, a three-acre materially closed ecological system containing rainforest, Savannah, marsh, marine, intensive agriculture and human habitat biomes.

1985-1991 Candidate for Biospherian Resident Research Team and participant in the Biospherian Training Program, including biome collection expeditions and participation in a marine expedition.

1990 Research operator for five-day completely closed system experiment in the Biosphere 2 Test Module.

1984-1985 Director of Research Applications, Tropic Ventures/Institute of Ecotechnics, Las Casas Project, Puerto Rico, responsible for the establishment, development, and ongoing management of the research information department of a tropical ecological research center focusing on identification of commercially valuable tropical plant crops and development of integrated systems incorporating economic production in tropical rainforests; species selection and collection for Biosphere 2.

1982- 1983 Manager, Scarborough House Hostel, London, responsible for staff management, documentation, program development and implementation for a community based residential project to reintegrate mentally handicapped adults into the local community.

1979- 1981 Development Officer, Service Civil International, Bihar, India, responsible for documentation and implementation of drought relief and agricultural systems program for a desertified tropical area, including orchard and garden plantations, nutrition, irrigation, drinking water systems and sanitation programs, seed banks and crop storage facilities.

1973 - 1974 Field Assistant, S.O.S. Children's Village, Kenya, responsible to assist manager in record keeping and administration of village facilities for 150 orphaned children, organized recreational programs and assisted in employment and training of house mothers.

EDUCATION

1974 - 1978 Bachelor of Arts with Honors, Applied Social Studies, Sheffield Hallam University, Sheffield, England.

SCIENTIFIC PUBLICATIONS

Nelson M, S. Silverstone, K.C. Reiss, T. Vakil, and M. Robertson 2011. "*Enriched secondary subtropical forest through line planting for sustainable timber Production in Puerto Rico".* Bois et Forêts des Tropiques, No. 309 (3) 51-61.

Nelson, M. S. Silverstone, P. Burrowes, R. Joglar, M. Robertson, and T. Vakil. 2009. *"The Impact of Hardwood Line-Planting on Tree and Amphibian Diversity in a Secondary Subtropical Wet Forest of Southeast Puerto Rico"***.** Journal of Sustainable Forestry, Volume 29, Issue 4, 2009.

Visscher, A., A-L. Paul, M. Kirst, A. K. Alling, S. Silverstone, G. Nechitailo, M. Nelson, W.F. Dempster, M. Van Thillo, J. P. Allen, R. J. Ferl. 2009. *Effects of a Spaceflight Environment on Heritable Changes in Wheat Gene*. Astrobiology May 9 (4): 359-67.

Nelson, M, Dempster, W.F., Alling, A, Allen, J., Rasmussen, R, Silverstone, S., and Van Thillo, M. 2006. *Cowpeas and pinto beans: yields and light system. efficiency of candidate space crops in the Laboratory Biosphere closed ecological system. COSPAR 2006* in Beijing, in press Adv. space Research.

Alling, A., Van Thillo, M., Dempster, W ., Nelson, M., Silverstone, S., Allen, J. 2005. *The Mars On Earth® Project: Lessons Learned from Biosphere 2 and Laboratory Biosphere Closed Systems Experiments*. Jpn. So. Biol. Sci. Space, Vol. 19, No. 4: 250-260.

William F.Dempster, J.P. Allen, A. Alling, M. Nelson, S. Silverstone, M. Van Thillo. 2005. *Atmospheric dynamics in the Laboratory Biosphere with wheat and sweet potato crops.* Advances in Space Research. 2005;35(9):1552-6.

M. Nelson, W.F. Dempster, S. Silverstone, A. Alling, J.P. Allen and M. Van Thillo, *Crop Yield and Light/Energy Efficiency in a Closed Ecological System: Two Laboratory Biosphere Experiments.* Advances in Space Research 35 (2005) 1539-1543.

Silverstone, S., M. Nelson, A. Alling and J.P. Allen. 2005. *Soil and Crop Management: Lessons from the Laboratory Biosphere 2002-2004*. Advances in Space Research Adv 35(9):1544-51.

Dempster, W.F., Van Thillo, M., Alling, A., Allen, J.P., Silverstone, S., Nelson, M. 2004. *Technical review of the Laboratory Biosphere closed ecological system facility*. Adv. Space Res., 34, 1477-1482

Silverstone, S., M. Nelson, A. Alling, J. Allen. 2003. *Development and research program for a soil – based bioregenerative agriculture system to feed a four person crew at a Mars base*. Adv. Space Res. 31(1): 69-75.

Nelson, M., W. Dempster, A. Alling, J.P. Allen, R. Rasmussen, S.Silverstone and M. Van Thillo.2003. *Initial experimental results from the Laboratory Biosphere closed ecological system facility,* Adv. Space Res. 31(7):1721-1730, 2003.

M. Nelson, J. Allen, A. Alling, W.F.Dempster, S. Silverstone. 2003. *Earth applications of closed ecological systems: relevance to the development of sustainability in our global biosphere,* paper presented at the World Space Congress, COSPAR general assembly, Houston, TX, October 2002, Advances in Space Research, 2003, 31 (7), 1649-1656.

Alling, A, Nelson, M., Silverstone, S and M. Van Thillo. 2002. Human Factor Observations of the Biosphere 2, 1991-1993, *Closed Life Support Human Experiment and Its Application to a Long-Term Manned Mission to Mars.* Life Support and Biosphere Science 8:71-82.

Salisbury, F.B., W.F. Dempster, J.P.Allen, A. Alling, D. Bubenheim, M. Nelson, and S. Silverstone. 2002. *Light, Plants, and Power for Life Support on Mars*. Life Support and Biosphere Science. Vol. 8, pp. 161-172.

Silverstone.S., R.R. Harwood, E. Franco-Vizcaino, J. Allen and M. Nelson, 1999. *Soil in the agricultural area of Biosphere 2* (1991-1993). Ecological Engineering 13 (1999) 179-188.

Silverstone, S., 1997. *Food production and nutrition for the crew during the first 2-year closure of Biosphere 2*. Life Support and Biosphere Science. Vol.4 pp.167-178.

Silverstone, S., M. Nelson . *Food Production and Nutrition in Biosphere 2: Results from the First Mission September 1991 to September 1993*. In Advances in Space Research Vol. 18, No. 4/5,pp (4/5)49-(4/5)61.

Nelson M., S. Silverstone, and J. Poynter. 1993. Biosphere 2 Agriculture: Test Bed for Intensive, Sustainable, Non-polluting Farming Systems. *Outlook on Agriculture* 22(3): 167-174.

W. Dempster, N. Alvarez-Romo, G. Hudman, T. MacCallum, S. Silverstone, M. Nelson, A. Alling. From Theory to Practice: The Initial Two-Year Closure of Biosphere 2. In P.J. Boston, ed. Proceedings of the Case For Mars V Conference, AAS Science and Technology Series 1996

PRESENTATIONS

"The Biosphere Story" Linking the story of Biosphere 2 to the present day work of Biosphere Foundation and sound environmental management practice. Presented between 2012 and the present day to multiple high schools in Bali and Singapore.

"Enriching a Rainforest", EcoVersity lecture series, Santa Fe, NM 2001

"Sustainable Agriculture – Feeding Eight People on a Half Acre", EcoVersity lecture series, Santa Fe, NM 2001.

"What's for Dinner on Mars", Mars Society Conference, Boulder, Colorado 1999.

"The Anthropogenic Biomes: The Role and impact of Man-Made Ecoregions of the Biosphere". Seminar presented to the Department of Liberal and Interdisciplinary Studies U.S. International University. 1998

Silverstone, S. 1996. The agriculture system of Biosphere 2. Paper presented at Linnean Society, 4th International Conference on Closed Systems, April 10-11, 1996, London.

"Biosphere 2: Total Systems Management," lecture at the Professional Women in Architecture and Engineering Association, 1990.

"Biosphere 2: Life Habitats for Earth and Space", lecture at the Science Teachers Conference, Eastern Washington University, Spokane, Washington, 1989

BOOKS

Alling, A., M. Nelson, and S. Silverstone. 1993 *Life Under Glass: The Inside Story of Biosphere 2.*
Synergetic Press, Santa Fe, NM.

Silverstone, S. 1993. *Eating in: From the Field to the Kitchen in Biosphere 2.* Synergetic Press, Santa Fe, NM.