

## Dr. Som B. Ale

Biological Sciences, University of Illinois  
(Chicago), IL, USA  
845 W. Taylor St., Chicago, IL 60607  
sale1@uic.edu

## Education

-PhD Biological Sciences (Ecology & Evolution)  
University of Illinois (Chicago), IL, USA  
*Mentor, Prof. Joel S. Brown*  
-MS Ecology. University of Tromso, Norway  
*Mentor, Prof. Joseph L. Fox*

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## POSITIONS

### Clinical Assistant Professor

University of Illinois (Chicago), IL. *2014 to present:*

Courses:

Bios 331 (ecology lab-course for majors; 4 sections each with 24 students), from 2014 to date

Bios 101 Population and community (over 300 students), from Fall 2017 to date.

Bios 594 Conservation Biology (2015 and 2016)

**Lecturer:** University of Illinois (Chicago), IL. *2012 and 2013:* BioS 331

### Postdoctoral Research Associate

University of Minnesota, UMN. *2009 - 2010:*

1. Researcher (Snow leopard corridor across Nepal Himalayas). *Mentor, Prof. J. L. David Smith.*
2. Co-Instructor (Field Methods in Research and Conservation of Vertebrate Populations, FW 4108) – an intensive summer course for wildlife and fishery majors at Cloquet Forestry Center, UMN (hands-on educational program center, for natural resources professionals and environmental educators).

Lakehead University (Canada). *2008 - 2009:*

Assessment of habitat selection strategies by small mammals in relation to climate change in Canada's arctic (Herschel Island, Yukon Territory). *Mentor, Prof. Douglas W. Morris.*

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## OTHER TEACHING-RELATED EXPERIENCE

**Adjunct teaching (general biology, Bio 114, and cell biology, Bio 121):** City Colleges (Wilbur Wright College, from 2011 to 2015); Malcolm X College (From 2016 to date).

### Study-Abroad Program Coordinator:

1. San Francisco State University, CA. *1988 - 1990.*

Coordinated student research, education and conservation projects of Wildlands Studies Program - Nepal program (1988, 1990). This included instructional courses in Kathmandu, country's capital, and a month's trekking in the high Himalaya, observing and collecting data on flora, fauna and land-use and resources utilization practices vis-à-vis population growth, tourism, culture and increasing globalization. The environmental trek would culminate to individual project reports.

2. World College West, CA – Nepal program. *1988 - 1990.*

Assisted undergrad students in research and home-stays in rural Nepal. World College West, California. Students' field projects included topics relevant to anthropology, culture, and resource conservation and utilization patterns.

**Teaching Assistant.** University of Illinois -Chicago. 2002 - 2007.

Courses: population and community ecology, evolutionary ecology, general ecology (with intensive field work), genetics, and cell biology. Conducted lab and discussion sessions.

**Guest lecturer:**

- Ohio State Univ., OH; DePauw Univ., IN; Roosevelt Univ. (Chicago), IL: 2013, 2014
- Lake Forest College, IL: 2006, 2007, 2013
- Truman Community College, IL: 2011.
- Lincoln Univ., MO, Univ. of Minnesota (Ecology, Evolution and Behavior). MN: 2009, 2010.
- Lakehead Univ. (Canada): 2008.

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## TEACHING INTERESTS

General Biology, General Ecology, Population Ecology, Community Ecology, Evolutionary Ecology, Ecology and Evolution, Conservation Biology, Cell Biology, and Behavioral ecology.

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## RESEARCH INTERESTS

Ecology, conservation biology, predator-prey relationships, vigilance and foraging theory, habitat selection theory, ungulate ethology, and integrative biodiversity conservation.

### Research experience

- Snow leopard (predator and prey) study. Nepal. 2011 to present.
- Habitat selection. Small mammals. Minnesota, USA. 2009 - 2010; Canada (Yukon Territory). 2008 - 2009.
- Theories of predation, vigilance, and foraging. Snow leopard, Himalayan tahr, and their interactions. PhD Thesis. Mt. Everest, Nepal. 2004 - 2006.
- Dominant & courtship behavior (Ungulate behavioral ecology). Annapurna, Nepal. 1997 -1999.
- Field Biology. Status of large mammals in the Annapurna Himalaya. GEO. Germany – Nepal project. 1999-2000.
- Foraging behavior. Pronghorn antelope, elk, and bison. Yellowstone and Titan National Parks. Earthwatch program, USA. 1997.
- Crop depredation by wildlife. Conservation Biology. Makalu, Nepal. 1993.
- Livestock depredation by large predators. Conservation Biology. Bio-systems Analysis, California, USA - Nepal project. Annapurna, Nepal. 1992-1993.

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## MANAGEMENT EXPERIENCE

Overall research, conservation and education management:

**Regional Consultant:**

Snow Leopard Conservancy - a nonprofit (Sonoma), CA. 2010 – 2016: Plan, design, and pilot conservation, education and research across the Himalayas of Nepal.

Natural Resources (Biodiversity) Management Experience:

**National Program Manager:**

GEF-UNDP funded Biodiversity Conservation Project (\$2.3 million). 2001-2002. Planned, designed and implemented biodiversity conservation, tourism management and culture conservation programs. Maximum numbers of employees supervised: 38.

## Officer-in-Charge:

National Trust for Nature Conservation. 1993-1997, 1999-2000. Planned, executed, and monitored several integrated conservation and development projects in Annapurna Conservation Area – Nepal's largest protected area. Maximum numbers of employees supervised: 36 (Unit Field Office). The annual budget ranging from US\$ 100,000 to 200,000.

## Experience in Organized Field Research Program:

## Principle Investigator:

Earthwatch Institute. Snow Leopard and other high altitude wildlife research, monitoring and conservation. 1999-2001 (Nepal); 1997-1998 (India).

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## PUBLICATIONS

### Peer-reviewed papers

- Ale, S. B., Halloway, A., Mitchell, W. A. and Whelan, C. J. 2019. Does God roll dice? Neutrality and determinism in evolutionary ecology. *Biology and Philosophy* 34 (1):3 (2019). DOI: 10.1007/s10539-018-9657-8
- Ale, S. B. and Mishra C. 2018. The snow leopard's questionable comeback. *Science* 359:1110.
- Schutgens, M. G., Hanson, J. H., Baral, N., and Som B. Ale. 2018. Visitors' willingness to pay for snow leopard *Panthera uncia* conservation in the Annapurna Conservation Area, Nepal. *Oryx* page 1 to 10. <https://doi.org/10.1017/S0030605317001636>.
- Baral, N., Kaul, S. Heinen, J. T. Ale, S.B. 2017. Estimating the value of the World Heritage Site designation: a case study from Sagarmatha (Mount Everest) National Park, Nepal. *Journal of Sustainable Tourism*, Taylor & Francis publication, DOI: <http://dx.doi.org/10.1080/09669582.2017.1310866>.
- Aryal, A., Shrestha, U. B., Ji, W., Ale, S. B. et al. 2016. Predicting the distributions of predator (snow leopard) and prey (blue sheep) under climate change in the Himalaya. *Ecology and Evolution* 6: 4065-4075.
- Ale, S. B. Shrestha, B. and Jackson, R. 2014. On the status of Snow Leopard *Panthera uncia* (Schreber, 1775) in Annapurna, Nepal. *Journal of Threatened Taxa* 6: 5534–5543.
- Shrestha, B., Ale, S. B., Jackson, R. et al. 2014. Nepal's first Pallas's cat. *Cat News* 60: 23–24.
- Dupuch, A., Morris, D. W., Ale, S. B., Wilson, D. J., and Moore, D. E. 2014. Landscapes of fear or competition? Predation did not alter habitat choice by Arctic rodents. *Oecologia* 174: 403-412.
- Ale, S. B., Bown J. S., and Sullivan, A. 2013. Evolution of cooperation: Combining kin selection and reciprocal altruism into matrix games with social dilemmas. *PLoS ONE* 8(5): e63761. DOI: 10.1371/journal.pone.0063761.
- Ale, S. B., Morris, D. W., Dupuch, A, and Moore, D. E. 2011. Habitat selection and the scale of ghostly coexistence among Arctic rodents. 2011. *OIKOS* 120: 1191-1200.
- Morris, D. W., Moore, D. E., Ale, S.B. and Dupuch, A. 2011. Forecasting Ecological and Evolutionary Strategies to Global Change: An Example from Habitat Selection by Lemmings. *Global Change Biology* 17: 1266–1276.
- Ale, S. B., Thapa, K., Jackson, R. M. and Smith, J. L. D. 2010. The fate of snow leopards in and around Mt. Everest. *Cat News* 53: 19-21.
- Ale, S. B. and Howe, H. F. 2010. What do ecological paradigms offer to conservation? *International Journal of Ecology*. Volume 2010 (2010), Article ID 250754, 9 pages -- doi:10.1155/2010/250754.

- Ale, S. B. and Brown, J. S. 2009. Prey behavior leads to predator: a case study of the Himalayan tahr and the snow leopard in Sagarmatha (Mt. Everest) National Park, Nepal. *Israel Journal of Ecology and Evolution* 55: 315-327.
- Lovari, S., Boesi, R., Minder, I., Mucci, M., Randi, E., Dematteis, A., and Ale, S. B. 2009. Restoring a keystone predator may endanger a prey species in a human-altered ecosystem: the return of the snow leopard to Sagarmatha National Park. *Animal Conservation* 12: 559-570.
- Wolf, M. and Ale, S. B. 2009. Signs at the top: Habitat and snow leopard activity in Sagarmatha National Park, Nepal. *Journal of Mammalogy* 90: 604-611.
- Morris, D., Kotler, B., Brown, J. S., Sundararaj, V. and Ale, S. B. 2009. Behavioral Indicators for Conserving Mammal Diversity. *Annals of the New York Academy of Sciences* 1162: 334-356.
- Ale, S. B. and Whelan, C. J. 2008. Reappraisal of the role of big, fierce predators! *Biodiversity and Conservation* 17: 685-690.
- Ale, S. B., Yonzon, P. and Thapa, K. 2007. Recovery of snow leopard *Uncia uncia* in Sagarmatha (Mount Everest) National Park, Nepal. *Oryx* 41: 89-92.
- Ale, S. B. and Brown, J. S. 2007. The Contingencies of Group Size and Vigilance. *Evolutionary Ecology Research* 9: 1263-1276.
- Ale, S. B. and Boesii. 2005. Snow leopard sightings on the top of the world. *CAT News* 43: 19-20.
- Shah, K. B., Ale, S. B., Chapagain, N. R., Acharya, R., Thapa, K., Gurung, A. and Hira, K. C. 2002. New mammal records from upper Mustang, Nepal with the notes on mammalian fauna of the area. *Journal of Natural History Society* 21: 33-44.
- Lovari, S. and Ale, S. B. 2001. Are there multiple reproductive strategies in blue sheep? *Behavioural Processes* 53: 131-135.

### Book chapters:

- Ale, S. B. in press. Mount Everest: Return of the snow leopard. In: *Wild Treasures: Reflections on Natural World Heritage Sites in Asia*. UNESCO C2C at WII, organised the release of the anthology at WII, Chandrabani, Dehradun, India.
- Ale, S. B., Shah, K. B., and Jackson, R. 2016. Conservation of Snow Leopard in Nepal. In: Nyhuis, P.J., McCarthy, T., and Mallon, D. (Eds.): *Biodiversity of the World: Conservation from Genes to Landscapes*. 1st Edition. Snow Leopards. Elsevier Press, 2016, p. 471-479.
- Hillard, D., Weddle, M., Padmanabhan, S., Ale, S.B. et al. 2016. Environmental education for snow leopard conservation. In: Nyhuis, P.J., McCarthy, T., and Mallon, D. (Eds.): *Biodiversity of the World: Conservation from Genes to Landscapes*. 1st Edition. Snow Leopards. Elsevier Press, 2016, p. 245-255.
- Ale, S. B. 2013. Monitoring snow leopard in Nepalese Himalaya. In: *Conservation Biology: A Primer for Nepal*. (eds Primack, R.B., Paudel, P.K., and Bhattarai, B.P.) A Primer for Nepal. Dreamland Publication, Kathmandu, Nepal, pp 192.
- Ale, S. B. 2012. Pangje. In: *Voice of Snow Leopard*. (ed Hunter, D.). University Press of Colorado, pp 121-128.
- Jackson, R.M., C. Mishra, T.M. McCarthy and Ale, S.B. 2011. Snow leopards: conflict and conservation. In: *The Biology and Conservation of Wild Felids*. (eds David, W. M. and Andrew J. L.). Oxford University Press, pp 417-430.
- Jackson R. and Ale, S. B. 2009. Snow Leopards: Is reintroduction the best option? In: *Reintroduction of Top-Order Predators*. (eds Hayward, M. W. and Somers, M.). Wiley-Blackwell, pp 164-186.

### Conference posters:

- Morris, D. W., Dupuch, A., Moore, D. E. and Ale, S. B. Can density-dependent habitat selection predict evolutionary adjustments to habitat change? Poster presented at the "24th International Congress for Conservation Biology 2010 meeting, 3 - 7 July 2010". Edmonton, Alberta, Canada. 2010.
- Lovari, S., Ale S. B. and Boesi, R. The large mammal community of Sagarmatha National Park, Nepal. In: Proceedings of the First Int. Karakorum Conference. (eds, Shams, F. A.). Pakistan Acad. of Geology Sciences and Ev-K2-CNR. Pan Graphics (Pvt) Ltd. pp 225-230. 2005.

### Conference papers:

- Ale, S. B. and Karky, B. S. Observation on conservation of snow leopards in Nepal. Proceedings of the 9th International Snow Leopard Symposium, ISLT, Seattle, pp 3-14. 2002.
- Ale, S. B. Rangeland, animal husbandry and wildlife in Annapurna, Nepal: A case study from Manang valley. In: Grassland ecology and management in Protected Areas of Nepal. (eds, Richard, C. Basnet, K., Shah, J.P. and Rout, Y.). ICIMOD, pp. 45-51. 2000.
- Jackson, R. M., Ahlborn, G., Gurung, M., and Ale, S. Reducing livestock depredation losses in the Nepalese Himalaya. In: Proceedings of the 17<sup>th</sup> Vertebrate Pest Conference. (eds, Timm, R. M. and Crabb, A. C.). University of California, Davis, pp 241-47. 1996.
- Ale, S. B. The Annapurna Conservation Area Project: A case study of an integrated conservation and development project in Nepal. In: Proceedings of the Eighth International Snow Leopard Symposium. (eds, Jackson, R. and Ahmad, A.). Islamabad, pp 155-169. 1995.

### Reports, booklets, and popular articles (Lead Author/Editor):

- Snow leopard scouts in Annapurna. An environmental (annual) booklet. Editor. 2014- 2015. Published by Snow Leopard Conservancy, CA and National Trust for Nature Conservation (Nepal), pp 84. 2013.
- The Ambassador of the Himalayas. Editor. A (true story) book on snow leopard encounters by Himalayan herders. Snow Leopard Conservancy, CA. pp 56. 2012.
- Snow leopard scouts from Mt. Everest. Sketch (children) booklet. Editor. Published by Snow Leopard Conservancy, CA, pp 37. 2011.
- Challenging and opportunities of human-wildlife conflict involving communities. Report submitted to committee for Zoos and Aquariums Committing to Conservation. Seattle, 2011.
- Snow leopards and other wildlife in Bhimthang, a corridor habitat, in mid-west Nepal. Snow Leopard Conservancy and Felidae Conservation Fund, CA, USA, pp 23. 2007.
- Snow leopard sightings on the top of the world. CAT News 43: 19-20. 2005.
- Have snow leopards made a comeback to the Everest region of Nepal? International Snow Leopard Trust, Seattle, USA. 2004.
- The Snow Leopard. Nepali Times (weekly): Issue #108: 23 August 02. 2002.
- Upper Mustang Biodiversity Conservation Project. Project booklet, GEF-UNDP, pp 30. 2001.
- Species diversity of Modikhola watershed, Nepal. An analysis, GEO Schultzt Den Regenwalde. V Vereinsregister VR 12380 Beim Amtsgericht, Hamburg Germany. 2000.
- Conservation of the snow leopard of Nepal. CAT News 32: 8-9. 2000.
- Religion protects Himalayan goral in the Annapurna region. Caprinae. December 2000.
- Some observation on conservation of snow leopard in Hemis National Park, India. International Snow Leopard Trust, Seattle, USA, pp 7. 1998.
- Snow leopards in remote districts of Nepal. Snowline XII: 2: 3-6. 1993.
- Land-use practices in Nar village, Manang: A need assessment for the Annapurna Conservation Area project, Nepal. USAID, pp 32. 1993.
- Land-use patterns and livestock depredation in several villages of east Kaski district. A Rapid Appraisal report. Biosystem Analysis, California, pp 79. 1993.

## Doctorate and Master Theses:

- PhD Biological Sciences, Ecology of the snow leopard and the Himalayan tahr in Sagarmatha (Mt. Everest) National Park, Nepal.
- MSc Ecology, The rutting behavior of blue sheep in the Manang valley, Nepal.
- MSc Zoology, Effects of grazing in Khangsar valley of the Manang region of Annapurna Conservation Area, Nepal.

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## GRANTS

- Taronga Field Conservation Grants (Australia) - \$14,160. 2014/2015
- Marmot (\$6,000 worth of) field gear support. 2013/2014
- U.S. Fish and Wildlife Service – The wildlife without borders fund \$24,791. August 2012.
- National Geographic Society - Big Cats Initiative Grants Program \$18,640. April 2012.
- Disney - Online Studios (Canada) - Club Penguin \$18,000. January 2012.
- Disney - Wildlife Conservation Fund (USA) \$19,850. November 2011.
- Booster Grant (Rufford Foundation, UK) c. \$18,000 (UK pound 11,766). September 2011.
- Disney - Friends for Change (USA) \$50,000. July 2011.
- Disney - Wildlife Conservation Fund (USA) \$19,500. 2010.
- Rufford Small Grant (UK) \$8,000. 2009.
- Felidae Conservation Fund (USA) \$14,600. 2007.
- Brookfield Zoo \$4,000.
- Z. McDonald, Vickers family (California), \$4,000.
- Rufford Small Grant (UK) \$8,000.
- World Wildlife Fund-USA \$8,400.
- The Institute for Wildlife Studies, California \$4,000.
- International Snow Leopard Trust (Seattle) \$5,000.
- Wildlife Conservation Society \$8,990.
- Provost Award \$2,000.
- World Wildlife Fund (Nepal) \$1,000; Ev-K2-CNR (Italy) \$950.
- Earth-watch Institute, \$25,000/year for three consecutive years.

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## AWARD

- Kinship Conservation Fellows. Western Washington University/Kinship Foundation. One of the 18 participants to develop projects integrating ecology with economy. 2010.
- Dean's Scholar Award. University of Illinois-Chicago. Award worth \$36,000. 2007.
- University Fellowship. University of Illinois-Chicago. Award worth \$35,000. 2006.

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## PROFESSIONAL ACTIVITIES

### Invited Speaker:

- The challenges and opportunities of human-wildlife conflict involving communities. Roundtable discussion. Zoos and Aquariums committing to conservation, 8-11 March 2011. Seattle.
- On the use of isodar in habitat-selection and climate change in a small mammal community at Herschel Island, Yukon, Canada. Conference on "Ecological and Evolutionary Implications of Climate Change", 6-7 March 2009. Thunder Bay, Canada.
- A competitive apparition haunts a three-species small mammal community in Canada's Arctic. 2nd annual conference, Arctic Wildlife Observatories Linking Vulnerable Ecosystems, 6-8 Feb. 2009. Quebec city, Canada.

- Finding snow leopards in the fear of their prey. Parent session - When does fear matter? A road map to the implications of trait-mediated effects to ecology. ESA 91st Annual Meeting, 6-11 Aug. 2006, Memphis, Tennessee.
- International Snow Leopard Symposium. Seattle. May 2002.
- Blue sheep of Manang (Nepal). International Conference on the Mountain Ungulates. 5-7 May 1997. Aosta valley, Italy.
- Integrated conservation and development program. The International Snow Leopard Conservation Conference, Islamabad, Pakistan, Nov. 1996.
- Director of Programs: Pangje Foundation, <http://pangje.org/> - a nonprofit (Colorado) dedicated for the snow leopard education, conservation and research across the Himalayas. 2016.

### Discoverer:

- Team member to discover Nepal's first Pallas's cat. 2014.
- Recorded snow leopard's return to Mt. Everest for the first time in 40 years - highlighted by "CNN", and >60 news-media (including the *New York Times*) and environmental journals (including *nature.com*). 2004.
- Recorded two new mammal species for Nepal -Tibetan wild ass *Equus hemionus kiang*, and Tibetan gazelle *Procapra picticaudata*. 2001.

### Contributor/Reviewer:

- Species survival strategy 2006: Snow Leopard Survival Strategy. Seattle, USA.
- Academic Curriculum 2001: Developed, as a core-team member, the first "curriculum on wildlife and natural resource management" for masters degree in Forestry. Institute of Forestry. Tribhuvan University, Nepal.
- Management Plan 1996: Annapurna Area Management Plan. Annapurna is Nepal's largest protected area.

### Journal (paper) Reviewer:

- Ethology, Ecology & Evolution, Journal of Wildlife Management, Ecology, IBIS, Oryx Animal Conservation, Wildlife Biology, Italian Journal of Mammalogy, Animal Behaviour, Integrative Zoology, Ecology, and PlusONE

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## MEMBERSHIP

- Cat Specialist:** Cat Specialist Group (North America Chapter), World Conservation Union, IUCN. 2006 - Present.
- Grant Review Committee Member:** Snow Leopard Small Grant Committee Snow Leopard Trust, USA. 2006 - Present.
- Founder Member:** - (Global) Snow Leopard Network: 2002 – Present; - Natural History Society of Nepal. 1991 - Present.
- Global Assessor (2015-2017):** Three-member Global Team to assess snow leopard for **Red List**, World Conservation Union, IUCN (Switzerland). 2015 - 2016.
- Director (since 2016):** Pangje Foundation (<http://pangje.org/>) dedicated for snow leopard research conservation and education in the Himalayas.