

Workshop "Natural Pastures and Mobile Animal Husbandry Under Pressure: The Cases of Lapland and the Tibetan Plateau", University of Oulu, Finland, June 2002

Workshop committee: Angela Manderscheid (co-chair: mobile animal husbandry), Alfred Colpaert (co-chair: pasture evaluation), Arvo Naukkarinen, Wu Ning, Ole Bruun, Jouko Kumpula.

Preface

Mobile animal husbandry is conducted in regions which are usually unsuited to other forms of land use, e.g. due to low or erratic precipitation, and high altitude or latitude. Natural pastures or rangelands are sources of forage for the livestock, and grazing management is based on the change of pasture grounds. The lifestyle of the owners is adapted to the migration of the herd (*e.g.* by a nomadic lifestyle). According to these changing socio-economic and ecological contexts, their way of life and production is subject to ongoing and rapid adaptation. Natural pastures, and mobile animal husbandry included, are under pressure globally due to various factors which include new borders, increased animal numbers, pasture degradation, the application of new technologies, exploration of natural resources, tourism, nature reserves and reforestation projects. The herders as well as those responsible for planning, developing and administering the regions in question have to cope with these dynamics.

A Workshop on Natural Pastures and Mobile Animal Husbandry Under Pressure: The Cases of Lapland and the Tibetan Plateau was arranged at the University of Oulu, Finland, on June 12-14, 2002. The aim was to compare mobile animal husbandry in different regional contexts. The core regions were Lapland and the Tibetan plateau. The issues of mobile animal husbandry in both of the regions were raised in the presentations of the invited speakers and other workshop participants. Contributions from other regional backgrounds, application-oriented reports on rangeland management and an interdisciplinary dialogue were also included. The overall objective was to update knowledge of region-specific dynamics and translate them into other regional contexts in order to create ideas as a base for new directions in mobile animal husbandry management. The workshop also served as a platform to present the results of the research project entitled "Ecological Carrying Capacity of Natural Pastures: A Case Study on the Tibetan Plateau", which was financed by the Academy of Finland.

This special issue contains extended and refereed versions of eight papers presented in the workshop. We would like to thank all those whose contributions made this special issue possible, including the authors of the papers, the reviewers and workshop participants. Many thanks to Matti Pietikäinen and Kerttu Kaikkonen for their help in the editing work. The financial support provided by the Nordic Council for Reindeer Research, the Trace Foundation, Turveruukki and the University of Oulu is gratefully acknowledged.

Angela Manderscheid
Alfred Colpaert

Program of the Workshop 'Natural Pastures and Mobile Animal Husbandry Under Pressure: The Cases of Lapland and the Tibetan Plateau'

Wednesday 12.6. 2002

Opening session Chair: Prof. A. Naukkarinen

09:30 Welcome address by **Prof. O. Heikkinen**,
Vice-Dean of the Faculty of Sciences, University of Oulu

9:45-11:15 **Invited speaker**
Prof. Wu Ning
Chengdu Institute of Biology, Academy of Science, China
Rangelands in eastern Tibetan Plateau: Ecology and sustainable management issue

Session 1 Chair: Prof. P. Mathiesen

11:30-12:00 **Prof. R. Helle**
Helsinki School of Economics and Business Administration, Finland
An important industry in the North American arctic. Reindeer industry shrank to the present relatively small-scale economy

12:00-12:30 **Dr. J. L. Fox, P. Mathiesen, D. Yangzom, M. W. Næss, Xu Binrong**
Dept. of Biology, Univ. of Tromsø, Norway
Modern wildlife conservation initiatives and the pastoralist/hunter nomads of northwestern Tibet

Session 2 Chair: Dr. J. Fox

13:30-14:00 **M. W. Næss, Dondrup Lhagyal, Drolma Yangzom, P., Mathiesen, J. L. Fox**
Dept. of Social Anthropology, Univ. of Tromsø, Norway
Nomadic pastoralist livelihood constraints in a nature reserve in northwestern Tibet

14:00-14:30 **Dr. A. Manderscheid, Yan Zhaoli, Wu Ning, A. Colpaert**
Dept. of Geography, Univ. of Oulu, Finland
From subsistence to a market economy: the current top three commodities of nomads on the Eastern Tibetan plateau

14:30-15:00 **sKal-bzang**
Southwest Institute of Nationalities, Chengdu, China
Case study of pasture use on the Tibetan plateau

Session 3 Chair: Dr. M. Nieminen

15:30-16:00 **S. Lefrère**
René Descartes University - Paris VI / Ethnology Department.
Reindeer Research Station (FGFRI)
Diurnal activities, social dominance and cardiac rhythm of female reindeer *Rangifer tarandus tarandus* L. in wintertime according to non-biotic parameters changes

- 16:00-16:30 **H. Norberg, M. Nieminen**
Finnish Game and Fisheries Research Institute, Reindeer Research Station, Kaamanen, Finland
 Predation on semi-domesticated reindeer in Finland: predators, compensations and current research
- 16:30-17:00 **Dr. J. Kumpula, A. Colpaert, U. Fielitz**
Finnish Game and Fisheries Research Institute, Reindeer Research Station, Kaamanen, Finland
 Studying effects of forestry and tourism on the pasture use of reindeer with GPS-tracking

Poster session 17:00-18:00 Chair: Dr. P. Åman

1. **V. Väisänen, J. Mikkola, A. Colpaert, J. Kumpula, M. Nieminen, O. Heikkinen**
Dept. of Geography, Univ. of Oulu, Finland
 Spatial and socioeconomic impacts of reindeer husbandry in northern Finland
2. **E. Goldings**
The Trace Foundation, New York, USA
 Nomads and markets: challenges of decentralized production—the case of yak cheese
3. **Prof. M. Sillanpää, R.M. Hulkkonen, A. Manderscheid, K. Pirkanniemi**
Dept. of Environmental Engineering, Univ. of Oulu, Finland
 Drinking water quality in the rangelands of the Eastern Tibetan plateau
4. **H. Kitti, T. Kumpula**
Arctic Centre, Univ. of Lapland Rovaniemi, Finland
 Classification of reindeer pastures: Mapping based on Traditional Ecological Knowledge (TEK) and remote sensing
5. **S. Zgleyshevska, R. Zadoyan**
The Faculty of Geology, Yerevan State University, Armenia
 Harmful and useful influence of small and big moving of animal husbandry, connected with erosion activity

Thursday 13.6. 2002

- 9:00-10:30 **Invited speaker**
Dr. M. Nieminen,
Finnish Game and Fisheries Research Institute, Kaamanen, Finland
 Finnish reindeer herding in change

Session 4 Chair: Dr. A. Colpaert

- 10:45-11:15 **Pekka Aikio**
Sami Parliament in Finland
 Holistic overview of reindeer herding and its interactions
- 11:15-11:45 **Dr. J. Å. Riseth, B. E. Johansen**
NORUT Social Science Ltd., Tromsø, Norway
 Development of a dynamic two-pasture – herbivore model

11:45-12:15

Dr. P. Åman

Dept. of Geography, Univ. of Oulu, Finland

Peat production areas as reindeer feed cultivation use – the case in the Paarnitsa-aapa mire, Northern Finland

Session 5

Chair: Dr. J. Å Riseth

13:15-13:45

T. Kumpula, A. Colpaert, A. Manderscheid

Dept. of Geography, Univ. of Oulu, Finland,

Inventory of high altitude pastures of the eastern Tibetan plateau using remote sensing

13:45-14:15

Dr. C. Uhlig, T. E. Sveistrup, I. Schjelderup

Holt Research Centre, The Norwegian Crop Research Institute, Tromsø, Norway

Impacts of reindeer grazing on soil properties on Finnmarksvidda, Northern Norway

14:15-14:45

Prof. Du Guozheng

State Key Laboratory of Arid Agroecology, Lanzhou University, China

Effect of fertilization on plant species diversity in an alpine meadow

Session 6

Chair: Dr. C. Uhlig

15:15-15:45

R.M. Omer, M.D. Swaine, A.J. Hester, I.J. Gordon, S.M. Raffique

Macaulay Land Use Research Institute, Aberdeen, UK

Influence of environmental factors on plant communities of semi arid areas of Hindukush, Karakoram and Himalayan mountain ranges of Northern Pakistan

15:45-16:15

B. Burkhardt, F. Müller

Ecology Center, Univ. of Kiel, Germany

System analysis and modelling of Northern Scandinavian reindeer management

16:30-17:30

Round table discussion **Chair: Prof. Wu Ning**

New directions for mobile animal husbandry

19:00

Banquet

Friday, 14.6. 2002

Excursion by bus to reindeer husbandry sites

9:00

Departure from Oulu

- Kuikkasuo (Peat area): *Peat production and reindeer husbandry. Some aspects* (P. Åman), Coffee/tea
 - Sarakylä: Visit of a *reindeer "farm" and the reindeer roundup place* of the Pudasjärvi herder cooperative. Ari Rytinki is reindeer owner and secretary of the reindeer herder cooperative, Pudasjärvi.
 - Lunch at the holiday resort Iso-Syöte
 - *Reindeer pasture evaluation*. A demonstration in the field (T. Kumpula)
 - Pudasjärvi: *Slaughter house and reindeer meat processing enterprise* (P. Juotasniemi)
- ca. 19:00 Arrival in Oulu