

NOR's Conferences on Reindeer Research 2001 and 2002

The 11th Nordic Conference on Reindeer Research, Kaamanen, Finland, 18-20 June 2001

Report by Rolf Egil Haugerud

This 11th NOR-conference was very successfully arranged in cooperation with RKTL Finnish Game and Fisheries Research Institute's staff at the research station near Inari in northernmost Lapland. The organisation and scientific program committee consisted of *Mauri Nieminen* (RKTL and NOR), *Jouko Kumpula* (RKTL), *Heikki Törmänen* (RKTL), *Öje Danell* (SLU and NOR) and *Rolf Egil Haugerud* (NOR), the latter also in the secretariat together with *Sari Siitari* (RKTL).

Approximately 75 persons attended the conference which was held for the second time at the RKTL reindeer research station. The main theme "Artificial feeding of reindeer" was presented in nine lectures but the conference included other topics as well in two lectures and in four poster sessions; "Production", "Pasture and feeding", "Physiology" and "Health issues". Totally 42 posters were presented. Overviews of the posters were given before each poster session. An abstract book was issued before the conference, also with abstracts in English (**Rangifer Report No. 5, 2001**). (Abstracts of all lectures and posters are found on web address www.rangifer.no/eng/conferences.html. Riseth's complete lecture in Norwegian is on web page www.nor.rangifer/manus-riseth.html). The social programme consisted of opening of an exhibition and reception at the Siida Sami Museum together with the 2nd World Reindeer Herders Congress. The sauna session and the excellent conference dinner were at the inn Kaamasen Kievari. The weather was really good, sunny, warm and without insects; the participants experienced the best of a Lapland summer.

The conference was opened by research leader *Mauri Nieminen*.

Lectures 19 June:

Session leader *Rolf E. Haugerud*, NOR

Pål Vegar Storebeier (invited - University of Tromsø), S. D. Mathiesen & M. A. Olsen.

Reinens vinterförling - förlintak og beitekvalitet / Winter nutrition in reindeer – food intake and forage quality.

Birgitta Åbman (invited) & Ö. Danell (Swedish University of Agricultural Sciences-SLU).

Utfodring av renar - möjligheter, effekter och ekonomi / Reindeer feeding - possibilities, effects and economy.

Session leader *Päivi Soppela*, Arctic Centre, University of Lapland

Veikko Maijala (invited) & M. Nieminen (RKTL).
Porojen talviruokinta - kokemuksia ja tuloksia Suomesta / Winter feeding of reindeer - experiences and results from Finland.

Pekka Huhtanen (invited - MTT Agrifood Research Finland).

Märehtijän ravitsemuksen kvantitatiivinen tarkastelu / Quantitative aspects of digestion in ruminants with special reference to reindeer.

Timo Soveri (invited - University of Helsinki).

Ruokinnan vaikutukset poron pötsiin / Effects of feeding on rumen of reindeer.

Session leader *Pekka Huhtanen*, MTT

Antti Oksanen (invited – The Norwegian School of Veterinary Science (NVH), Dept Arctic Vet Med, Tromsø).

Poron ruokinta ja terveys / Reindeer feeding and health.

Morten Tryland (NVH, Dept Arctic Vet Med, Tromsø), T. D. Josefsen & A. Oksanen.

Smittsom munnskurv - en förlingsrelateret sjukdom hos rein / Contagious ecthyma - a disease related to feeding of reindeer.

Session leader *Birgitta Åbman*, SLU

Mauri Nieminen (invited) & V. Maijala (RKTL).

Ruokinta ja poronlihan koostumus / Feeding and chemical composition of reindeer meat.

Eva Wiklund (SLU).

Effekter av utfodring på renköttets kvalitet / Effects of feeding on the quality of reindeer meat.

Lectures 20 June:

Session leader *Rolf E. Haugerud*, NOR

Jan Åge Riseth (Narvik University College).

Fra overskudd til underskudd på vinterbeitekapasitet - Hvordan kan vi forklare utviklinga i Vest-Finnmark reinbeiteområde, Norge, 1960-2000? / From excess to lack of winter pasture capacity-how can we explain the development of West Finnmark Reindeer Pasture Area, 1960-2000?

Peter Waller (SWEPAR, SVA), A. Oksanen, M. Nieminen & O. Halvorsen. Poron loiset Fennoskandiassa – populaatiodynamiikka, torjuntakeinot ja niiden ympäristövaikutukset / Macroparasites in

semi domesticated reindeer of Fennoscandia – Parasite population dynamics, control options, and environmental impact implications.

Poster sessions 20 June:

Poster Session 1 – Production (12 posters)

Overview of posters by **Öje Danell**, SLU.

Bergkvist, L. Resurs- och företagsekonomisk analys av renskötsel företag / Resource and Business Economic Analysis of Reindeer Husbandry Firms.

Breie, H., Ø. Holand & R. B. Weladji. Effekt av globalt klima på høstvekter hos reinsdyrkalv (*Rangifer tarandus*) / Effect on global climate on autumn calf weight in reindeer (*Rangifer tarandus*).

Henaug, C., T. Tveraa, P. Fauchald & N. G. Yoccoz. Naturlig produksjon og høsting i reindriftnæringen / Production and harvesting in the reindeer husbandry industry.

Holand, Ø., P. Aikio, H. Gjostein, M. Nieminen, K. Hove & R. G. White. Modern reindeer dairy farming – the influence of machine milking on udder health, milk yield and composition.

Karlsson, A-M. Beslutsfattande inom rennæringen / Decision making in reindeer herding.

Norberg, H., V. Maijala, M. Nieminen & J. Kumpula. Vasatuoton ja – kuolleisuuden arvioinnissa käytetyt menetelmät / Methods in assessing reindeer calf production and mortality.

Reindriftsforvaltningen i Norge. Norwegian Reindeer Husbandry: administration and management.

Ropstad, E., S. D. Albon, O. Jobansen, R. Pedersen, E. Dabl & N. J. C. Tyler. Reproduksjonssuksess hos rein relatert til variasjon i klimafaktorer / Reproductive success of reindeer associated with climate variability.

Rødven, R. & N. J. C. Tyler. Korttids tap i kroppsmasse hos rein / Short-term loss in body mass in reindeer.

Tyler, N. J. C. & R. Rødven. Livstidsreproduksjonssuksess er ikke en funksjon av gjennomsnittlig levendevekt hos voksne rein / Fertility is not a function of mean live body mass in adult female reindeer.

Wiklund, E. & I. Hansson. Slaktkroppssammansättning i relation till vikt och kondition hos renkalvar / Carcass composition of reindeer calves in various physical condition.

Ågren, E. Orsaker till perinatal dödlighet hos renkalvar i hägn / Causes of perinatal mortality in reindeer calves.

Poster Session 2 – Pasture and feeding (9 posters)

Overview of posters by **Jouko Kumpula**, RKTL.

Heiskari, U., M. Nieminen & L. Syrjälä-Qvist. Wilted and unwilted grass silage in reindeer winter feeding.

Josefsen, T. D., K. K. Sørensen, T. Mørk, S. D. Mathiesen

& K. A. Ryeng. Sultedød på tross av fôring – et tilbakevendende problem i praktisk reindrift / Starvation death despite feeding – a recurring problem in reindeer husbandry.

Kumpula, T., A. Manderscheid & A. Colpaert. Luonnonlaitumet ja paimentolaistalous: esimerkinä tiibetin ylänkö / Natural pastures and mobile animal husbandry management: A case study on the Tibetan plateau.

Norberg, H., V. Maijala & M. Nieminen. Poron ravintokasvien, -sienien ja -jäkälien maittavuus ja ravintosisältö / Palatability and nutrient composition of plants, fungi and lichens foraged by reindeer.

Pentha, S. M., N. Tyler & P. Wookey. Eksperimentell oppvarming av beiteplanter for rein *in situ* øker produksjonen av planter / Experimental warming of reindeer forage plants *in situ* increases their growth.

Skarin, A., Ö. Danell, R. Bergström & J. Moen. Interaktioner mellan ren, människa och topografi / Interactions between reindeer, humans and topography.

Säkkinen, H., E. Eloranta, S. Vabiala, M. Puukka, J. Timisjärvi, S. Saarela & E. Ropstad. Magnesiumia sisältävä pötsibolukset poron Mg-lisänä / Magnesium alloy rumen boluses as Mg-supplement for reindeer.

Uhlig, C. & T. Sveistrup. Innvirkning av reinsdyrbeiting på jordegenskaper på Finnmarksvidda / Impacts of reindeer grazing on soil properties.

Weydabl, H. T. Fôring av avmagrede og underernærte reinsdyrkalver – fordypningsoppgave ved Norges veterinærhøgskole / Feeding of emaciated and undernourished reindeer calves – a degree project at the Norwegian School of Veterinary Science.

Poster Session 3 – Physiology (10 posters)

Overview of posters by **Päivi Soppela**, University of Lapland.

Gjostein, H., Ø. Holand, K. Hove & T. Bolstad. Melkenedgivningsrefleksens hos reinsdyr / The milk let down mechanism in reindeer.

Lefèvre, S. C., M. Nieminen, T. Mossing, & J. Goldberg. Poron vasan (*Rangifer tarandus tarandus* L.) erotamisen vaikutus imentään, maidontuottoon ja sydämen sykkeeseen koeoloissa / The effect of separation of reindeer calf (*Rangifer tarandus tarandus* L.) on suckling events, milk yield and heart rate under experimental conditions.

Kobo, N. M., V. Maijala, M. Nieminen & A. R. Pösö. Haihtuvien rasvahappojen kuljetus solumwmbraanien läpi / Volatile fatty acid transport across cell membranes.

Nilsson, A., M. Murphy & B. Åbman. Effekt av foderstat på vommikroorganismer i renar / Dietary effects on rumen microbes in reindeer.

Olsen, M. A, T. A. Utsi, R. Rødven & S. D. Mathiesen.

Ernæringsmessige effekter av fôring på blodparametre i rein / Nutritional effects of artificial feeding, on serum biochemistry in reindeer

Pösö, A. R., U. Heiskari, M. Lindström, M. Nieminen & T. Soveri. Lihasten valkuaisaineainenvaihdunta kaupallisella rehulla ruokituissa ja rajoitetulla jäkäläruokinnalla olleissa poronvasoissa talvella / Muscle protein metabolism in fed and undernourished reindeer calves during winter.

RKTL. Finlands renforskning / Reindeer research in Finland.

Ryeng, K. A., S. Larsen, B. Ranheim, G. Albertsen & J. M. Arnemo. Klinisk evaluering av nyetablerte optimale immobiliseringsdoser av medetomidin-ketamin hos oppstallet rein (*Rangifer tarandus tarandus*) / Clinical evaluation of established optimal immobilizing doses of medetomidine-ketamine in captive, semi-domesticated reindeer (*Rangifer t. tarandus*).

Soppela, P. Poron kunto ja eri kudostasvojen rasvahappokoostumus / The fatty acid composition of different tissue fats in reindeer as related to nutritional condition.

Åhman, B., J. Wallsten, Ö. Danell & P. Udén. Smältbarhet av lav och ensilage i vomvätska från ren / Digestibility of lichens and silage in reindeer rumen fluid.

Poster Session 4 – Health issues (11 posters)

Overview of posters by *Timo Soveri*, University of Helsinki.

Aschfalk, A., & N. Denzin. Serumprevalensen for *Salmonella* spp. i tamrein i Finland og Norge / Sero-prevalence to *Salmonella* spp. in semi-domesticated reindeer in Finland and Norway.

Aschfalk, A., K. A. Ryeng & C. Höller. Forekomst av *Campylobacter* spp., *Clostridium perfringens*, *Salmonella* spp., *Yersinia* spp. og shigatoxin-1,2-produserende bakterier hos kadaver av tamrein i Nord-Norge / Occurrence of *Campylobacter* spp., *Clostridium perfringens*, *Salmonella* spp., *Yersinia* spp. and shigatoxin-1,2-producing bacteria in semi-domesticated reindeer cadavers in northern Norway.

Josefsen, T. D., Mørk, T., Sørensen, K. K. & Ryeng, K. A.

Lungemarkinfeksjon hos rein / Lungworm infection in reindeer.

Nergård, E. R. Slakteforskrifter for reinsdyr og oppdrettsvilt kontra viltkjøtt forskrifter / The slaughterhouse law of reindeer and breded game, compared to the law of game meat.

Rissanen, K., J. Ylipiö & Y. Norokorpi. Tidmässiga trender för ¹³⁷Cs halter i skogssvampar - inverkan på renar efter en kärnkraftverksolycka / Time trends of Cs-137 in wild mushrooms-influence on reindeer after a nuclear accident.

Ryeng, K. A., T. D. Josefsen, K. K. Sørensen, T. Mørk, M. Tryland, A. Aschfalk, S. D. Mathiesen, I. Schjelderup, H. G. Åmot & R. G. Sarre. Tap og dødelighet hos rein i Finnmark - et forprosjekt / Loss and mortality in reindeer in Finnmark County, Norway – a preliminary project.

Sørensen, K. K., T. Mørk, T. D. Josefsen & K. A. Ryeng. Patologiske funn hos rein som har dødd av underernæring / Pathological findings in reindeer succumbed to starvation.

Tikkanen, M., V. Hirvelä-Koski, M. Nylund, E. Neuvonen, L. Sibvonen & A. Huovilainen. Parapoxvirus porojen suutaudin aiheuttajana 1999-2000 / Parapoxvirus infection in Finnish reindeer 1999-2000.

Weladji, R. B. Estimering av effekt av insektplage, modellert ved hjelp av klimadata, på vekts hos reinsdyr om sommeren / Use of climatic data to estimate the effect of insect harassment on summer weight gain in reindeer (*Rangifer tarandus*) calves.

Ågren, E. Missbildningar hos renkalvar / Malformations in reindeer calves.

Åsbakk, K., R. E. Haugerud, M. Nieminen, A. C. Nilsen & A. Oksanen. Reinens hudbrems - *Hypoderma tarandi* - om egenskaper ved førstestadiums-larven / Reindeer warble fly - *Hypoderma tarandi* - histological and immuno-histological properties of the 1st instar larvae.

The chairman of NOR *Öje Danell* concluded the conference and invited to NOR's 12th Nordic Conference to be held in Kiruna, Sweden, March 2002.