

Cooperation on Laestadius

Meetings between different research groups at the Centre provide fertile ground for inter-disciplinary cooperation. Researchers in shamanhood and botany share an interest in Laestadius and are arranging a seminar.

See the back page

The new Board

The Centre for Advanced Study acquired a new Board as of 1 January 1999. The new Board members have been appointed for a five-year term.

The new Board of the Centre:

Professor Torstein Jøssang (chairman);
Professor Jan Fridthjof Bernt (new);
Ann-Kristin Olsen (new);
Deputy Rector Kathrine Skretting (new);
Professor Tore Vorren (new);
Professor Johan A. Aarli;
Secretary-General Hans M. Barstad (observer, the Norwegian Academy of Science and Letters).

The new Council

The members of the new Council of the Centre for Advanced Study are:

Tove Bull, Rector, University of Tromsø;
Kaare R. Norum, Rector, the University of Oslo (new);
Kirsti Koch Christensen, Rector, the University of Bergen (new);
Emil Spjøtvoll, Rector, the Norwegian University of Science and Technology;
Inger Moen, President, the Norwegian Academy of Science and Letters (new);
Arne Bjørlykke, President, the Norwegian Academy of Technical Sciences (new);
Grethe Knutsen, Chairman, the Standing Committee on Research of the Norwegian Storting;
Sven Erik Skønberg, director, the Confederation of Norwegian Business and Industry;
Berith Bergersen, the Norwegian Federation of Trade Unions;
Arild Underdal, Vice Chairman, the Research Council of Norway.



Representatives of Russian, American, and European botanical research traditions are participating in a panArctic Flora project at the Centre for Advanced Study. (Photo: Ellen Stokland)

Botanical diplomacy for the Arctic

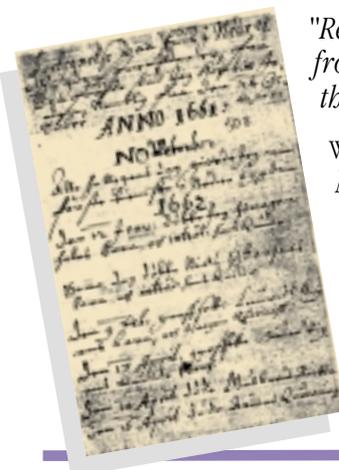
If you think a mountain avens (*dryas octopetala*) is the same flower all over the Arctic, think again.

Widely different research traditions have resulted in diverging principles for the determination of plant species in the Arctic. Whereas Norwegian scientists maintain that there is only one species of mountain avens in Svalbard, Russian specialists hold that there are three. Who is right is not

the issue: what matters is agreeing on what determines the species, which is what the participants in the panarctic flora project aim to do. The ambitious project involves politics and diplomacy as much as botany and biology.

Read more on pages 5-7

Death enables us to interpret history



"Records of events occurring in Nedre Bygden from the time of my first arrival, which was on the 24th of October Anno 1661."

With those words, the vicar of Rendal church in the parish of Åmot in the North Østerdal valley began his entries in the church register in 1661. On the following pages, he recorded marriages, burials, christenings and other events in the lives of his parishioners. Reading between his lines, the demography group at the Centre for Advanced Study is investigating the decline in mortality in Europe from 1750 to 1900, and shedding new light on history.

Read more on pages 2-4

Death tells us about how people lived



"Death's Dispensary": through history deadly diseases were sometimes spread by drinking water. (Woodcut from 1866 in A.S. Lyons and R.J. Petrucelli, *Medicine, illustrated history*, Abradale Press, New York 1987.)

Most people today can expect a long life. A Norwegian girl born in the 1990s has a life expectancy of 81 years, while boys will probably reach an age of 75. In the 1820s the figures were much lower, 48 and 45 years respectively. So we have in fact added a whole generation to our lives - for a number of reasons.

Comparing how old people were when they died in 1680 and 1980, the demographer Arthur E. Imhof found a striking difference. People died young three centuries ago, most often from epidemic diseases, starvation or war. Now we reach a ripe old age, and the causes of death are chronic illnesses (see fig. 1-2). Over the same period, infant mortality has fallen drastically. In 1680, every fourth infant died in its first year; by 1820 the figure in Norway had fallen to 140 per thousand births, while today it stands at 5.2 - which is still considered too high.

There are many reasons why mortality figures change, not least the medical advances which have enabled us to cure diseases and

have virtually eliminated most of the scourges of earlier days. But other important factors affecting how long we live include living conditions, the climate, religion, the position of women, diet, hygiene, and social conditions in general. By studying the mortality of a population one can thus also learn about its living conditions and diet, not just about who died when.

The historical demography research group working at the Centre this year is headed by Professors Sølvi Sogner and Ståle Dyrvik. Both can be described as pioneers in Norwegian demographic research. They have invited an inter-disciplinary group of scholars from Norway and abroad, all of whom are engaged in independent projects with different approa-

ches to the decline in mortality in Europe in the 1750 to 1900 period.

Norway specially placed

In this connection Norway is in a special position, because it had the lowest mortality throughout the 1800s. Yet very few Norwegian scholars concentrate on historical demography, and those few are scattered at different institutions. The discipline is growing, however, and a special foundation course in demography was recently set up at the University of Oslo's Department of Economics.

At the international level, interest is keen and research well organised. Several major conferences and international research projects are currently taking place, with infant mortality attracting special attention. This also applies to the group at the Centre, not least because that is the type of mortality which showed the earliest signs of declining.

Sølvi Sogner emphasises how useful it is to collect specialists under the same roof and make it easier for them to cooperate across the boundaries of their various projects. Although it is not yet part of the provisional plans, Professor Sogner does not entirely discount the possibility that the cooperation, especially among the Norwegian participants, may result for instance in a joint book project.

"Research can often be a lonely business, individuals digging into source materials or contemplating computer screens in splendid isolation," Sogner says. "Gathered here at the Centre we can take part in continuous dialogues, whether at meetings or informally over a coffee. That we are all so intensely interested in the same area of research is precisely what makes our stay here so inspiring."

Colleague Ståle Dyrvik agrees. Both believe that the project they are engaged in can help to shed new light on a very extensive field, very much of which still remains unploughed.

Professors Sogner and Dyrvik are concentrating on Norwegian mortality statistics from a very early period. In Sogner's opinion, the cold climate was one important reason why mortality began to decline earlier in Norway than elsewhere in Europe. Micro-organisms, vermin and bacteria had tougher conditions to overcome in Norway than further south. Other factors which she notes are that Norway's was predominantly an agricultural society, and that living conditions and water supplies were better in rural areas than in towns.

It was not until well into this century that mortality fell to a lower level in towns than in the country. This came about as a result of

Mesoscopic Physics

Professor Yuri Galperin of the Physics Department of the University Oslo will be heading next year's natural science research group. The project he will be carrying out is in the field of mesoscopic physics, specifically normal conductors and superconductors.

Physics is about how various components in matter affect each other, and the consequences for the matter's properties. Studies of microscopic systems entail focusing on atom-sized components, smaller than one nanometre, that is one billionth of a metre. Macroscopic systems are considerably larger, and can be observed by ordinary optical microscope.

The laws of classical physics are based on macroscopic systems. But research in this century has shown that the laws break down for systems that are smaller than one nanometre: hence the development of quantum theory. During the same period, the discovery was also made that, when their temperatures are lowered, certain types of metals, known as superconductors, are able to conduct electricity without resistance. This can only be accounted for by the quantum theory, despite the 50 nanometre distance over which the electrons interact. To arrive at a full understanding of this phenomenon, one needs to apply both quantum theory and classical theoretical physics, in addition to new theoretical insights.

It is this new field of research which has been given the name "mesoscopic physics", because it is located, so to speak, halfway between microscopy and macroscopy. It came into prominence especially after developments in microelectronics made it possible to produce extremely small components, right down to a few nanometres. Next year's natural science research group at the Centre will assemble scholars from Norway and abroad who between them will contribute to new insight in this area. Some of the participants will be:

- Professor Yuri Galperin, the University of Oslo (head of group);
- Prof. Boris L. Altshuler, Princeton University;
- Prof. Amnon Aharony, University of Tel Aviv;
- Prof. J. Beenakker, University of Leiden;
- Prof. O. Entin-Wohlman, University of Tel Aviv;
- Prof. L. Glazman, University of Minnesota;
- Prof. Alex Hansen, NTNU, Trondheim;
- Prof. E. H. Hauge, NTNU, Trondheim;
- Prof. Yoseph Imry, Weizmann Inst., Israel;
- Prof. Mats Jonson, Chalmers Univ., Sweden;
- Prof. D. E. Khmel'nitskii, Cambridge University;
- Prof. Gerd Schön, University of Karlsruhe;
- Prof. Robert Shekhter, Chalmers University;
- Prof. Boris Shklovskii, Univ. i Minnesota;
- Prof. Boris Z. Spivak, Univ. of Washington.

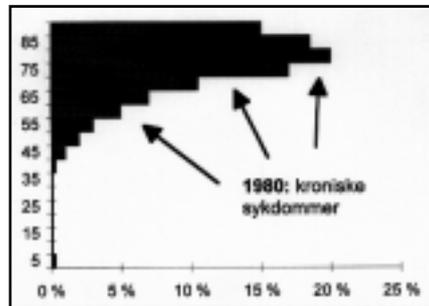
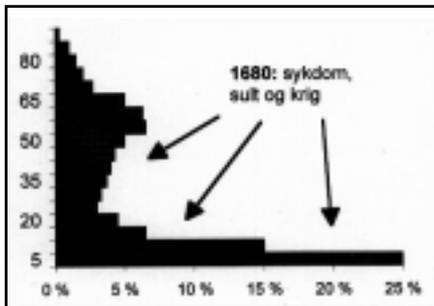


Fig. 1-2 Life expectancy. In 1680 people died young as a result of disease, starvation and war. In 1980 people died old, as a result of chronic illnesses. The figures are reproductions of graphs drawn by Artbur E. Imbof.

medical advances, better hospitals, and improved infrastructure which gave the towns better water supplies. There used to be little doctors could really do in cases of serious illness, which is why it was not until this century that proximity to hospitals had any decisive effect on people's hopes of survival.

Closeness to the past

Demographers focus in particular on population statistics, supplied in Norway by the Central Bureau of Statistics. But material that dates back to before 1850 comes from other sources, principally church registers. Some Norwegian church registers go back to the 1600s, while in certain European countries registers can be found that are nearly 500 years old. The church kept no population statistics as such, but because priests registered all the duties they performed, events like christenings, funerals and marriages are on record. A funeral implies a death and a christening a birth. Not all fatalities were registered, however: a seaman who died at sea and was not found would not be buried either, and would accordingly be "missing" from the church register.

Ståle Dyrvik notes that the study of church

registers brings one uniquely close to the persons in question. Entries give their names in full and other personal information, and one can read the events in their lives between the lines. That makes them more than faceless numbers. Professor Sogner counts baptisms, noting how many children people had and how often they had children.

"If there is a considerable interval between christenings, the likelihood is that the mother nursed her babies," Sogner says, adding that children who were given mother's milk had better chances of survival.

ES

Members of the group:

- Prof. Sølvi Sogner, Oslo (head of the group);
- Prof. Ståle Dyrvik, Bergen (head of the group)
- Professor George Alter, Indiana;
- Dr. Anders Brändström, Umeå;
- Professor William H. Hubbard, Bergen;
- Professor Kari Pitkänen, Helsinki;
- Dr. Frans van Poppel, the Hague;
- Dr. Jürgen Schlumbohm, Göttingen;
- Førsteaman. Gunnar Thorvaldsen, Tromsø;
- Professor Robert Woods, Liverpool.

Ståle Dyrvik and Sølvi Sogner

The research group is headed by two pioneers in Norwegian demography, Professors Sølvi Sogner and Ståle Dyrvik.

Sølvi Sogner (b. 1932, dr. philos. 1976) has held a History chair at the University of Oslo since 1988, and also lectures in the new foundation course in demography at the University's Department of Economics. She has worked in such fields as historical demography, family history, women's history, and legal and social history in the early modern period, and has written numerous books in the area in both Norwegian and English. Her contributions to several historical works include the chapter on Europe 1500-1750 in the women's history published by Cappelen in 1992, and volume 6 of the Aschehoug "History of Norway: War and Peace", on the 1660-1780 period, published in 1996.

Ståle Dyrvik (b. 1944) has been Professor of Early Modern History at the University of Bergen



since 1988. Taking an early interest in population studies, he wrote a history of the parish of Etne in South-Hordaland in 1969, when still a student. He has also contributed to several historical works, writing the volume "Den lange fredstiden" (the long period of peace) on the 18th century in the series on the history of Norway published by Cappelen (1979), and a similar contribution to the series published by Aschehoug in 1996. One of Dyrvik's interests has been the popularisation of demographic research, efforts for which he received a popularisation award in 1978 from the Research Council of Norway.

Religion affects life expectancy

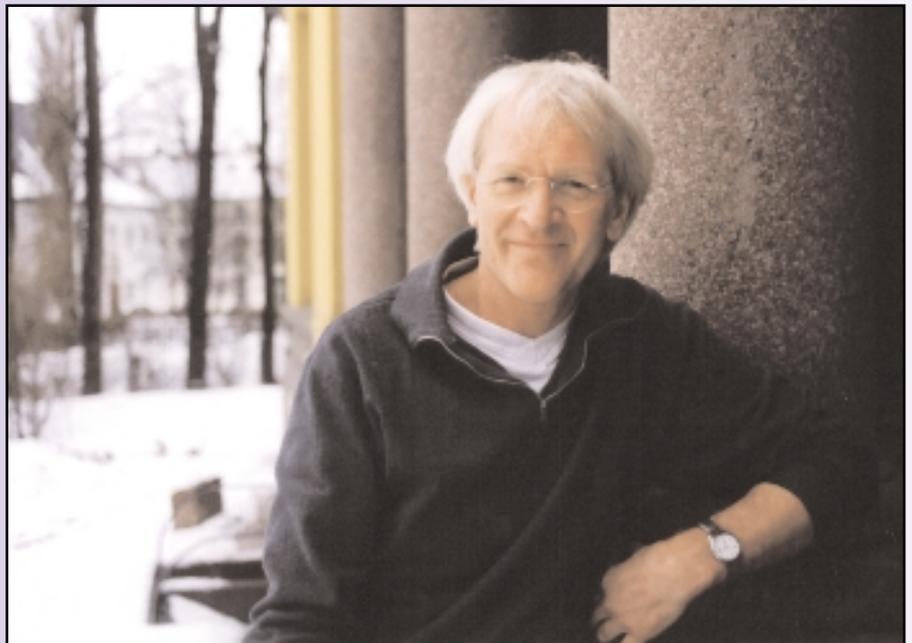
Tell me which god you believe in, and I'll tell you how long you will live...

It may not be quite that straightforward, but Dutch demography researcher Frans van Poppel does claim that Jews and members of strict Christian congregations live much longer than Roman Catholics. He is participating in this year's demography group at the Centre, studying the inter-relations between religion and infant mortality in the Netherlands around the turn of the century.

Research has shown that mortality is much lower, among orthodox sects like the Mormons, the Amish and the Adventists in particular, than in other sections of the population. People's whose lifestyles entail frequent prayer or church-going do in fact statistically have a better chance of a long life. However, van Poppel emphasises that even if he chose to convert from Catholicism to Judaism, this would not be likely to add ten years to his life. It is in the last analysis the religious codes with regard to diet, sexual morality, alcohol consumption, and family relations which determine how long we live. Whether longer life means greater happiness is another matter.

Traditionally, however, different religious groups have lived separately from one another, making it difficult to distinguish the factors due to regional differences from those attributable to faith. Heavily Catholic populations have however shown negative impacts on mortality in some areas, van Poppel says, adding that the Netherlands are a special case because Catholics, Protestants and Jews have lived within the same limited geographical area. That has made it possible to exclude regional variations and establish that religious, economic and social factors have been decisive for the varying mortalities in population groups.

In his research van Poppel uses population registers drawn up in the Netherlands in the 1860 to 1900 period. The sources are excellent because of all the details given, including each



Frans van Poppel from the Netherlands is studying the connection between religion and infant mortality, and has shown great differences in mortality between Roman Catholics and Jews. (Photo: Ellen Stokland)

individual's faith and family circumstances. In the course of two years, the Dutch scholar has collected data on a total of 3 500 marriages in the Hague, 60 per cent of which took place in various Protestant groups, 30 per cent among Catholics, and roughly 5 per cent among Jews. He monitors the married couples over time, finding out how many children they had and what became of the children: whether they reached the age of 12.

Other information in the population registers concerns the families' social and economic living conditions and the mother's age when she gave birth.

Jewish children valued more highly

The data van Poppel is comparing relate primarily to Jews and Catholics, and reveal significantly higher mortality among Catholics, especially because many more Catholic children died in their first year of life. Jews show distinctly lower mortality in the 1900s, which is surprising if one takes into account that they generally lived under poorer social conditions than the average population. The case of the Jews has consequently caught the attention of many researchers, who note the importance of their guidelines for diet and hygiene. The store they set on education led to a higher proportion of physicians; among the other factors noted are long periods of breast-feeding and the higher value set on each child.

Van Poppel points out that among Catholics the attitude to children was quite different. The fact that they were not esteemed as highly as among the Jews contributed to the much higher rate of infant mortality. In addition, Catholics had many children, which in itself adds to the risk of infant mortality. That raises the question of whether or not that very experien-

ce – that a higher proportion of children never grew up – can have led Catholics to have more children? Van Poppel doubts it, asking which came first, the chicken or the egg?

Catholic scepticism

Another important factor was the openness of the religious groups to the outside world. Whereas the Jews were quick to make the most of advances in health care and medicine, Catholics were much more sceptical towards developments from outside their own environment. New information about diet and health was therefore rejected by Catholic leaders who stuck to their old convictions.

High mortality therefore lasted much longer among Catholics despite government efforts to counteract it. Catholics refused to attend non-Catholic institutions, so the answer was to build up a parallel institutional network with Catholic hospitals and universities.

Those institutions still exist, but today their religious profile counts for less. Physicians and scientists are no longer required to be Catholics in order to be appointed to Catholic hospitals or seats of learning. Nevertheless, van Poppel is no stranger to the idea that similar measures will have to be implemented in order to integrate new population groups into the public health services.

The connection between religion and mortality is no longer so clear in Western Europe, and infant mortality has been substantially reduced. Now it is the so-called Third World which is burdened with the problems which troubled our part of the world at the turn of the century. But as Frans van Poppel sees it, those countries can learn a great deal from Europe's experience.

ES



Not always mountain avens...

1999-2000

The Effectiveness of International Regimes

Why do some attempts to solve common problems through international cooperation succeed while others fail? Why are some international regimes more effective than others? These are the fundamental questions which the social sciences research group will be attempting to shed new light on in the coming academic year.

Putting it crudely, one might say that earlier research has sought the answers along two main paths. One consists of examining the characteristics of the problems confronting the parties, some of which are intellectually more complicated or politically more "malignant", and accordingly more difficult to solve, than others. By this reasoning, the challenge for research is to define precisely which characteristics make a problem malignant or benign.

The point of departure for the second path is the ability to solve problems. The idea is that some systems and institutions have greater problem-solving capacities than others. So the task for scholars is to find out precisely what it is that determines that capacity. There are no simple answers, what it takes depending to some extent on the type of problem. Capacities can only be defined in terms of the nature of the task in question. We know that both these paths lead to important insight. We know more today about what makes a problem malignant than about what determines our ability to solve it through voluntary cooperation. It will therefore be particularly important to gain new understanding of how the design of an international regime influences the results it achieves.

Next year's social science research group will be headed by Professor Arild Underdal of the University of Oslo's Department of Political Science. A final agreement has yet to be concluded with one more foreign participant, but as of March 1999 the group had the following members:

- Professor Arild Underdal, University of Oslo (head of the group);
- Senior Lecturer Jennifer Bailey, NTNU, Trondheim;
- Senior Lecturer Gunnar Fernann, NTNU, Trondheim;
- Professor Jon Hovi, University of Oslo;
- Professor Christer Jönsson, University of Lund, Sweden;
- Research Director Olav Schram Stokke, the Fridtjof Nansen Institute, Oslo;
- Professor Oran R. Young, Dartmouth College, USA;
- Professor Michael Zürn, University of Bremen, Germany.

A mountain avens (*Dryas octopetala*) is not always a mountain avens. They aim to write a universal Arctic flora, a project involving politics and diplomacy as much as botanic expertise. But the panarctic flora project at the Centre for Advanced Study has made good progress and is expected to complete its work early in the new millennium.

A group of botanists from the world's northernmost countries are gathered round a microscope at the Centre for Advanced Study. They carry magnifying glasses in their inside pockets, the walls are papered with thousands of dried flowers, and reference books in Norwegian, Russian, English and Latin are within easy reach. Their shared aim is to draw up a universal Arctic flora in which the species concepts, relationships and taxonomy are the same for the whole of the Arctic – which is far more complicated than it sounds.

Whereas in the animal kingdom species are often easily distinguishable – the difference between a lion and a tiger is easy to grasp – botanical boundaries are blurred. Agreed principles are needed for deciding what is to be considered a species and what should only be seen as

a variation within the same species. And for the representatives of different traditions to reach such agreement presents quite a challenge.

Botanical diplomacy

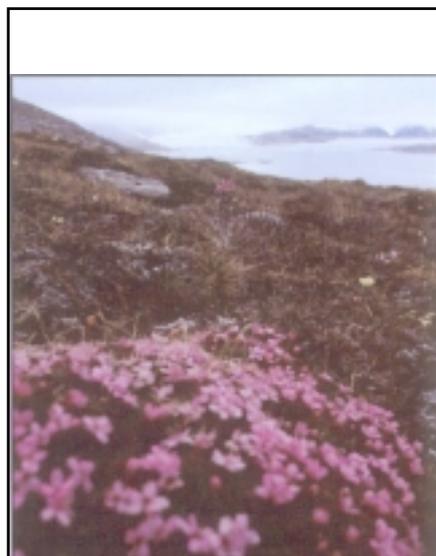
"Research up to now has been carried on in closed rooms, and as a result different traditions for delimiting and naming species have developed in the former Soviet Union, Western Europe and North America," says Professor Reidar Elven. Together with Professor Inger Nordal he has gathered botanical expertise at the Centre for Advanced Study in Oslo to resume a panarctic flora project originally launched early in the 1970s by the Russian Boris Yurtsev and the American David Murray.

Because of the Cold War and financial and other institutional barriers, the project came to a halt, and until recently scientists had virtually given up agreeing on a common Arctic flora. Widely diverging research traditions clashed, with no party willing to abandon its own principles. In this respect the research group at the Centre is living up to the Norwegian tradition of diplomatic arbitration on "neutral" ground.

Although many stumbling-blocks still lie ahead, the two Norwegian heads of the group believe that the project has made substantial progress since work at the Centre began in September of last year, and they expect to have a complete "checklist" ready by the beginning of the year 2000. It will define species, genera and taxonomy, making it possible to write a universal Arctic flora - the scientific work of reference which will cover every species in the Arctic and be applicable for the whole world.

The first challenge was to define the actual Arctic, which is not simply a matter of degrees

Continued on the next page



*Moss campion (*Silene acaulis*) on Svalbard. Arctic flowers are the issue for the group of international experts gathered at the Centre. (Photo: Arnodd Håpnes)*

of latitude. Climatic conditions are the principal determining factor.

"The Gulf Stream moves the borders of the Arctic northwards," Professor Nordal explains. However, the research group soon agreed on where the limits to the Arctic lie, and have also agreed on divisions into five zones and 26 regions. All that now remains is to agree on what to call the regions, a question that Nordal thinks will soon be settled.

Flowers with no bees

"One thing which makes the Arctic so special," Nordal continues, "is that species have much wider areas of distribution than in temperate zones. Whereas the species diversity in temperate and tropical zones is geographically limited - one cannot expect species found in France also to be found in the United States or South America - Arctic species are distributed over much wider areas because of the climate. In practice, frozen seas link continents, so that the wind can transport species across the ice and over vast distances. That is why scientists interested in Arctic botany should cooperate across continents instead of sitting behind closed doors as they have done up to now".

Another important factor distinguishing Arctic from other flora is the much greater extent to which the former uses other methods of reproduction than the usual male flower + female flower = baby flower. In the Arctic there are hardly any insects to help with fertilisation, so plants either have to fertilise themselves - be both male and female at the same time - or clone themselves to reproduce the race.

This entails an extreme form of inbreeding - quite common, incidentally, in the vegetable kingdom - which has probably contributed to many slight variations within species. The question is where to set the limits for a species. There are no absolute dividing lines, only sliding scales, so what belongs or does not belong to the same species or genus becomes a matter of definition.

"Traditions with regard to how narrowly to define species have varied vastly," Nordal and Elven say. "A survey of Siberian flora shows great species diversity, among the greatest in the north. But we are uncertain whether this is because Siberia really is an area with such diversity - a so-called evolutionary hotspot - or because a



A hive of activity around the microscope, amidst dried flowers and diagrams. As Professor Reidar Elven goes into the details of various kinds of hairs on the stem of a small flower, colleagues in the panarctic flora project listen and comment. On this occasion there was full agreement. (Photo: Ellen Stokland)

narrow species concept has led to a misleading impression."

In the Soviet Union, Marxist research principles were applied which prompted a very narrow species concept, creating an impression of vast biological diversity in the region. In Western Europe and the North America other principles were adopted, sometimes embracing wide variations within the same species but on other occasions applying even narrower definitions than under the Soviet system.

It is not the case, moreover, that a "wide" species concept automatically includes several "narrower" ones; clearly the conceptual apparatus and divisions of the different research traditions sometimes diverge so widely that it takes a vast effort merely to achieve a full overview.

One or more mountain avens?

A second problem is that different names have been given to the same plant. Nordic researchers believed for a long time that the Svalbard poppy (*Papaver dahlianum*) was only to be found around the North Atlantic, while it now appears that the flower grows throughout the Arctic but has different names. Arctic poppies in particular have confronted the research group with major challenges, for how many species of poppy are there? This was the topic for discussion in several workshops held by the group, and in Inger Nordal's opinion substantial progress has been made in harmonising the species concepts.

Another difficult plant is the mountain avens, selected by the group as the project's

logo. Whereas Nordal believes that there is only one species of mountain avens on Svalbard, one of her Russian colleagues insists that there are three.

A certain amount of terminological confusion also springs from the defined Latin names of species. The names themselves cause no problem, being based on international law and fully accepted on all sides; the use of the names, however, has varied from place to place.

But despite confusion, disagreement and hobby horses, the botanic diplomacy at the Centre for Advanced Study has worked wonders, and will soon bring forth a trail-blazing work of reference on Arctic flora.

ES

Members of the group

- Prof. Inger Nordal, Oslo (head of group);
- Prof. Reidar Elven, Oslo (head of group);
- Professor Susan G. Aiken, Ottawa;
- Professor Christian Brochmann, Oslo;
- Dr. Arve Elvebakk, Tromsø;
- Dr. Bente Eriksen, Gothenborg;
- Professor Bengt Jonsell, Stockholm;
- Dr. Hördur Kristinsson, Akureyri;
- Professor Dave F. Murray, Fairbanks;
- Dr. Marianne Phillip, Copenhagen;
- Dr. Vladislav Petrovsky, St. Petersburg;
- Dr. Volodya Razzhivin, St. Petersburg;
- Dr. Alexei Skvorcov, Moskva;
- Dr. Nicolai N. Tzvelev, St. Petersburg;
- Dr. Boris Yurtsev, St. Petersburg;
- Dr. Pavel Zhmylev, Moscow.



The Svalbard poppy: how many poppy species are there in the Arctic? (Photo: Inger Nordal)

Outstanding recruitment in Norway

Oslo alone has more students of Arctic botany than Alaska, Canada and Denmark/Greenland between them. The foreigners are green with envy.

The American and Russian scientists in the panarctic flora project are very envious of the good recruitment the discipline is enjoying in Norway. Whereas the North American and Russian expertise, on the average, is approaching retirement, the Norwegian research environment is seeing a steady influx of new students. A number of them are currently becoming involved in the project at the Centre for Advanced Study.

In Russia, hardly any students remain in the subject, mainly as a result of the crisis in the Russian economy. Alaska, Canada, and Denmark/Greenland have fewer students of Arctic botany than Oslo alone. There are so few scientists left in the field that the North Americans are largely conspicuous by their absence from the Centre, and there are no experts from Greenland linked to the project. The trend in the United States and Canada is for students to be attracted to more lucrative studies like biotechnology or agriculture-related subjects, or to purely theoretical courses.

Nevertheless, Inger Nordal hopes that in the longer run the panarctic flora project may stimulate recruitment at other research institutions. She tells us that some 15 Norwegian graduate students and research scholars are associated with the project. Reidar Elven notes that field studies are more strongly placed in the Nordic countries than in the other northern countries; something he suggests may be because we tend to be more down-to-earth and empirical. "After all, we are born with skis on our feet," he says with a smile.



Research scholar Hanne Hegre Grundt is one of a number of young Norwegian scientists participating in the panarctic flora project. (Photo: Ellen Stokland)

Research scholar Hanne Hegre Grundt is one of the numerous younger scientists linked to the project. Her interest in the development of the Whitcomb grass (*Draba*) species has taken her on field work to Alaska, and she plans to go to Siberia. As the areas around the North Atlantic were heavily glaciated during all the ice ages, little development took place there; in the Bering Straits, on the other hand, there was a great deal.

Through genetic studies, Grundt aims to find out where the Whitcomb grass came from and whether it can have developed into today's species before reaching the Arctic, or whether its development was the result of events in the drastic and dynamic Arctic environment which arose as recently as 2 to 3 million years ago. **ES**

Inger Nordal and Reidar Elven

The Arctic Flora research group is headed by Professors Inger Nordal and Reidar Elven of the University of Oslo. Both have participated in several international research projects, while at the same time building up a good research environment in Norway which ensures good recruitment to the discipline.

Inger Nordal (born 1944, PhD from the University of Uppsala) has held a chair at the University of Oslo's Biology Department since 1987. She originally specialised in tropical African flora, and contributed her expertise on East Africa, Ethiopia and Cameroon to the regional flora project. Since 1987 she has also worked on Nordic/Arctic flora, among other things carrying out important genetic studies of Scandinavian mountain flora. She questions earlier theories that mountain flowers survived the ice ages, believing that Scandinavian mountain flowers are probably of more recent origin.



Reidar Elven (born 1947) became Professor at the University of Oslo Botanical Gardens and Museum in 1996, after holding positions as Lecturer in Botany at the University of Oslo and the University of Tromsø. His main areas of research have been ecology and plant geography in the mountains in Scandinavia and along North Norway and Arctic seashores. Elven has been in charge of Norway's scientific flora (Lid's flora) since 1990, and also supervises the checklist (a simplified reference work) of vascular plants on Svalbard.

1999-2000

Classical Chinese Philology

Next year's humanities research group will be bringing together scholars with a wide range of interests in classical Chinese philology, with Professor Christoph Harbsmeier of the University of Oslo as their chairman.

Among the world's highly cultured civilisations, China's was historically one of the most influential and impressive. Chinese history has moreover been documented from as far back as 3 000 years ago, providing a unique opportunity to study the culture. With a number of leading specialists from major eastern and western universities cooperating, the research group will carry out a contrastive and systematic description of the traditional Chinese conceptual world. The group will discuss selected shades of meaning in the key concepts which dominated and formed traditional Chinese thinking in the fields of politics, economics, poetry, aesthetics and philosophy.

In the source material the group will use, there is comprehensive digital documentation of classical Chinese literature from about 800 BC to 100 AD, including 24 books with electronic translations into English. On the basis of this material, it has been possible to build up an electronic synonym dictionary of classical Chinese, covering about 11 000 words. These have been sorted into synonym groups and general semantic categories.

The project will result in a synonym dictionary of classical Chinese, illustrated by the most recent archaeological finds which shed light on the material environment of the time.

The research group will comprise a large number of participants and contributors, including:

- Professor Christoph Harbsmeier, University of Oslo (head of the group);
- Prof. Judith Boltz, University of Seattle;
- Prof. William Boltz, University of Seattle;
- Prof. Lothar von Falkenhausen, UCLA;
- Prof. Huang Jingui, University of Zhejiang;
- Professor David Keightley, the University of California at Berkeley;
- Professor David Knechtges, the University of Seattle, USA;
- Professor Michael Lackner, the University of Göttingen, Germany;
- Prof. Andrew Plaks, Princeton University;
- Prof. Michael Puett, Harvard University;
- Prof. Jiang Shaoyu, University of Peking;
- Professor Edward Shaughnessy, the University of Chicago, USA;
- Prof. Chang Taiping, University of Seattle;
- Prof. Qiu Xigui, University of Peking.

The Centre for Advanced Study

is an independent foundation with a board appointed by the Norwegian Academy of Science and Letters and the Universities Council. Prominent Norwegian and foreign scholars are invited for one-year stays to engage in research in the Centre's premises on Drammensveien, in the basement and attic of the Academy's villa.

Each year, activities are organised in three research groups, with from six to ten members each. The work of each group is planned and organised around a common theme and headed by one or more prominent scholars. Groups are normally chosen within each of the following three areas:

- Humanities
- Social science/law
- Natural sciences/medicine

In the 1998-1999 academic year, the following groups are working at the Centre for Advanced Study:

"The Language of Religion in Northern Contexts: Shamanhood, Northern Identity and Mentality", headed by Professor Håkan Rydving and Professor Juha Pentikäinen;

"Historical Demography: the Decline in Mortality 1750-1900", headed by Professor Sølvi Sogner and Professor Ståle Dyrvik;

"The Species Concept in the far north", headed by Professor Inger Nordal and Professor Reidar Elven.

The Centre for Advanced Study is exclusively a basic research institution, where participants have no other obligation than their own research. The Centre was opened on 1 September 1992.

Accommodation for visiting scholars

Every year the Centre for Advanced Study provides housing for 10 to 12 visiting scholars, some who are here alone and others who bring their families. If you are planning to let a fully furnished flat or house for a shorter or longer period, please get in touch with the Centre.

ISSN: 0804-3272

Common interest across disciplinary boundaries: Botanist and cultural interest in Laestadius

The botanist Inger Nordal and the culture scholar Juha Pentikäinen discovered a common interest across their disciplinary dividing lines. Now they are arranging a seminar and writing a Nordic book about Lars Levi Laestadius.

The benefits which scholars at the Centre for Advanced Study derive from shared interests and exchanges of new knowledge extend beyond the internal activities of their particular groups. When they all get together for lunch, at popularising lectures, or at social gatherings, the talk soon crosses disciplinary boundaries. And suddenly shared interests are discovered, or new and unexpected information obtained that can advance one's own project.

The Russian researcher into shamanhood Elena Glavatskaya had been wondering for a long time why, for a short period in the last century, one population group in the Urals had stopped breast-feeding its children, which had resulted in a sharp rise in infant mortality. She thought it must have been attributable to some sort of misunderstanding, until one of the scholars in the demography group told her that there had been similar episodes in certain areas of Norway. That pointed her to other possible explanations, which might never have occurred to her unless coincidence had brought demographers and researchers into shamanhood together at the Centre.

An informal chat across the Centre's festive board at last year's Christmas party, between the group leaders Juha Pentikäinen (shamanhood) and Inger Nordal (Arctic botany), revealed that they shared a keen interest in Laestadius, and has resulted in an exciting project on which the two groups are cooperating.

Invitations to a research seminar

Lars Levi Laestadius (1800-1861) collected information about Sami legends and myths, and was also a reputable botanist who played



Laestadius as depicted by G. A. Hütting in Kvindelund, Reimund ed. "Lars Levi Laestadius: Fragmenter i Lappska Mythologien" NIF, Åbo 1997.

an important part in early botanical surveys of Lappland. The year 2000 will mark his two hundredth anniversary, so the two scholars have taken the first steps towards producing a joint inter-disciplinary Nordic book about him. The project will be launched at an inter-disciplinary seminar at the end of April.

ES

The Unknown Laestadius

Nordic inter-disciplinary seminar

Wednesday 28 April, 10 am to 5 pm

To register and for further information,
phone the Centre at 22 12 25 00.

The Centre for Advanced Study

at the Norwegian Academy of Science and Letters

Office manager: Unn Haaheim Hagen
Drammensveien 78, 0271 OSLO, Norway
Tel: +47 22 12 25 00
Fax: +47 22 12 25 01
E-mail: shs@shs.uio.no
Internett: <http://www.shs.uio.no/>

The Centre for Advanced Study Newsletter

Editor/layout: Ellen Stokland **English translation:** Burton
Printed by: EKB Grafisk, Oslo
Circulationn: 8.000 (Norwegian) 1.500 (English)

Published twice yearly, the Centre's Newsletter aims to provide information on activities at the Centre and to promote closer contacts between research environments. Permission to copy articles must be obtained from the Editor.