



Annual Report 2010

About the NTNU Museum of Natural History and Archaeology

The NTNU Museum of Natural History and Archaeology is a university museum and a unit of the Norwegian University of Science and Technology (NTNU). The Museum is located at Kalvskinnet in the centre of Trondheim. Its activities in natural and cultural history include research, maintaining collections, educational initiatives, and arranging exhibitions. We also have two botanical gardens: Ringve Botanical Gardens and Kongsvoll fjellhage (Kongsvoll Alpine Garden). Our history goes back more than 250 years, to the establishment of the Royal Norwegian Society of Sciences and Letters (DKNVS) in 1760.

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The Jubilee Year of 2010

The year of 2010 will go down in history as one of the most exciting and eventful for a long time: the Jubilee Year with a visit by the King, the Norwegian Museum of the Year Award 2010, and the implementation of a comprehensive strategic process represent highlights of the year.

The 250th anniversary of DKNVS as well as NTNU's centenary celebrations have provided us with many opportunities to reflect on the long and changing activities of the Museum. What knowledge and experience will we take with us into the future? First, the Museum has always been an institution that has understood the signals from a world in constant change; it has managed to adapt to new roles and functions in society. Winning the Norwegian Museum of the Year Award 2010 is an indication that the Museum has once again succeeded in responding to impulses from the outside world and adapting to new circumstances: in future, success in research will also involve success in communicating research to society. For this reason, the Museum has made a strong and focused commitment since 2002 to build up dissemination of research and give the Museum back to the public.

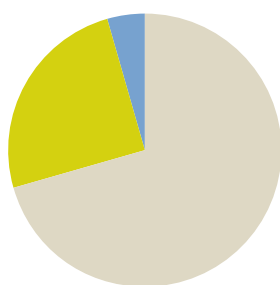
The challenge ahead will be to maintain this position by continuing to develop understanding, knowledge, and tools that enable us to become the international centre of expertise in research communication that we want to be. At the same time, the Museum's new strategic plan for 2011–2016 identifies important new challenges: research activities must be strengthened both quantitatively and qualitatively. In this way, the NTNU Museum of Natural History and Archaeology will continue to be involved in competing for scarce research resources, and will make an even more substantial contribution of knowledge to safeguard our natural and cultural environment.

Axel Christophersen, Museum Director



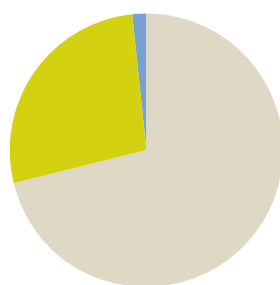
The figures speak

Income



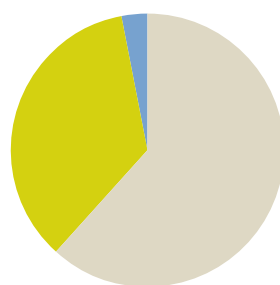
2008

State appropriation NOK 80.554'
External funding NOK 28.813'
Other income NOK 4.783'



2009

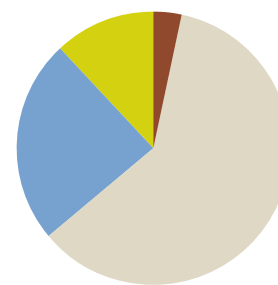
State appropriation NOK 76.143'
External funding NOK 28.940'
Other income NOK 1.650'



2010

State appropriation NOK 78.129'
External funding NOK 44.734'
Other income NOK 3.677'

Expenses



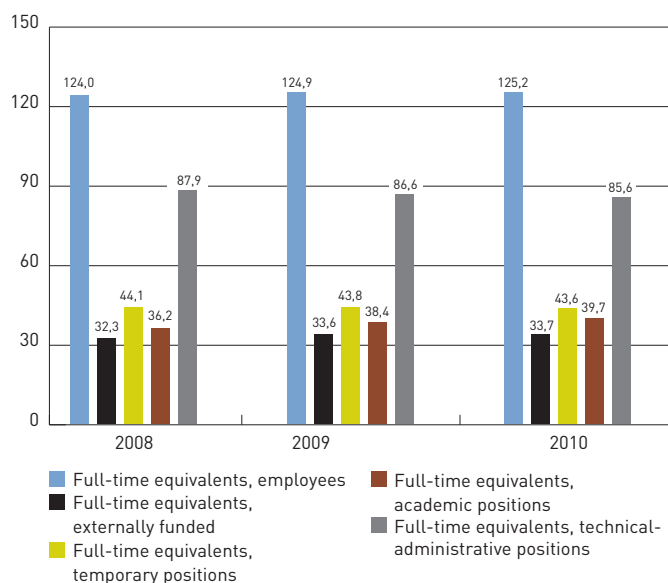
2010

Investments NOK 4.554'
Payroll and soc. costs NOK 77.134'
Other operating expenses NOK 30.669'
Internal items NOK 15.020'

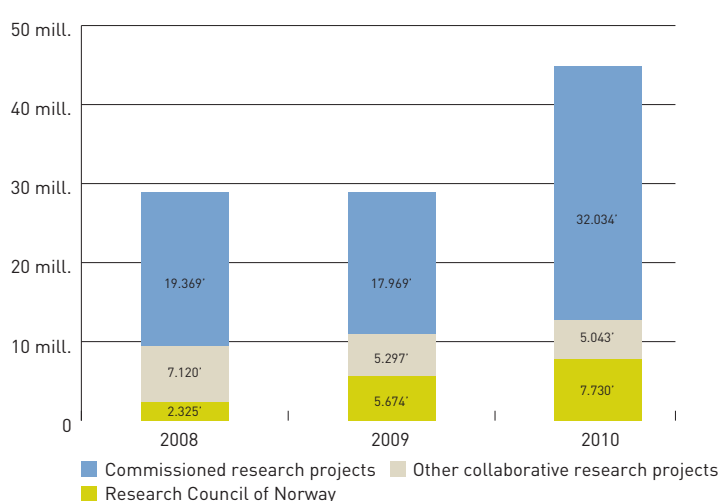
Revenue is generated from two primary sources: An appropriation from the State and commissioned/collaborative research projects funded by private- and public-sector sources. The State appropriation is relatively stable, but was lower than in 2008 because of the reduction of funds for preservation and conservation of the scientific collections allocated as one-off appropriations (NOK 8.0 million in 2008 and NOK 3.0 million in 2009). Income from commissioned and collaborative research fluctuates much more, depending on factors such as the economic conditions for development activity. After two lacklustre years in commissioned and collaborative activity in 2008 and 2009, the NTNU Museum of Natural History and Archaeology experienced a substantial increase in 2010, primarily related to a large excavation project at Torgård/Tiller and commissions for the Norwegian Biodiversity Information Centre.

Expenses are adapted to the level of income, as the aim is to achieve a break-even result. Payroll and social security expenses account for more than 60% of total costs. Internal items consist primarily of rent to NTNU.

Staff



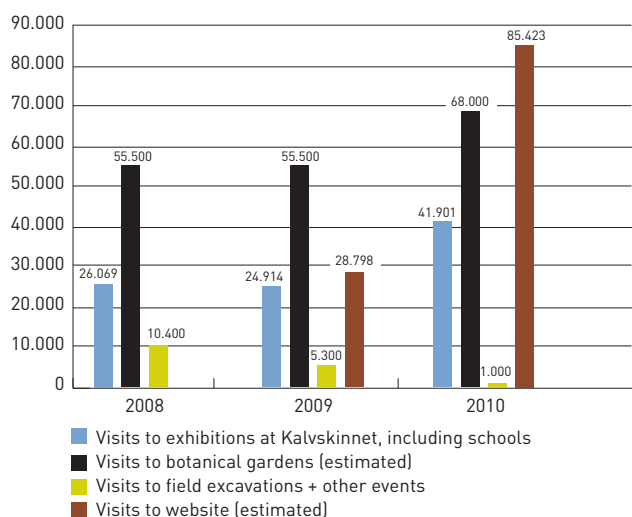
Breakdown of revenue, collaborative and commissioned activities



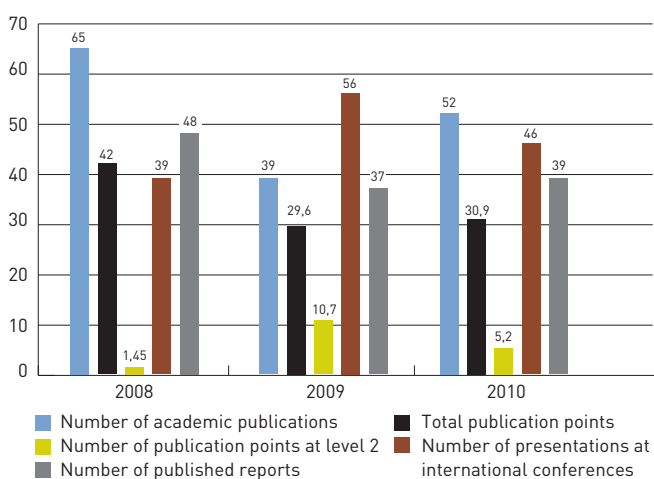
Revenue within collaborative and commissioned activities (BOA) is divided into two. Collaborative activity is defined as financial support from a donor where there is no requirement for counter-performance and where the recipient may also contribute to the project. Projects funded by the Research Council of Norway are defined as collaborative research projects. Commissioned activities are defined as projects in which the commissioning party, in exchange for payment, is to receive specific counter-performance/delivery on completion. Commissioning parties must finance all costs associated with the projects, that is, there is no contribution from the recipient.

The Museum has had an increasing volume of collaborative research projects funded by the Research Council of Norway during the past two years, while other collaborative activity has been somewhat lower. Contract volume increased significantly in 2010 after two weak years. To some extent, this is determined by factors beyond the control of the Museum. Although revenue from collaborative and commissioned activity increased to NOK 45 million in 2010, the level still does not match the best years. In 2003 and 2004, the revenue amounted to more than NOK 60 million.

Attendance



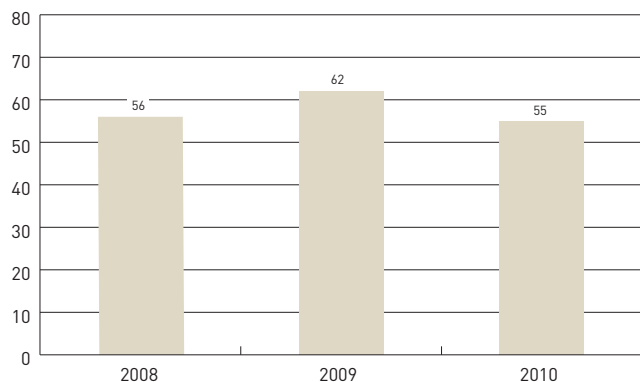
Publication



Total physical visits to the Museum's facilities and activities showed a gratifying increase from 85,700 in 2009 to 111,000 in 2010. Attendance figures for the exhibitions at Kalvskinnet almost doubled in 2010, with new exhibitions and free admission during the jubilee year. The estimated number of visits to Ringve Botanical Gardens also increased.

Archaeological excavations

Number of administrative excavations per year



Collections

	2008	2009	2010
Cultural history collections: Estimated number of object items		444.516	453.425
Natural history collections: Number of objects	1.379.571	1.373.951	1.378.719

Media coverage

	2008	2009	2010
Media hits, Norwegian	272	1.001	762
Media hits, English	0	45	4
Coverage at Forskning.no	2	14	17

Source: Retriever

Studies

	2008	2009	2010
Archaeology: number of field course days	2.224	2.338	2.014
Biology: number of field course days	490	490	285
Archaeology: number of master's degree examinations with supervisor at the Museum	9	5	4
Biology: number of master's degree examinations with supervisor at the Museum	2	3	2

Carbon dating (¹⁴C)

	2008	2009	2010
Dating, archaeology	517	655	1.414
Dating, natural science	98	161	231

The numbers include both conventional radiocarbon and Accelerator mass spectrometry dating



The jury's motivation for the Norwegian Museum of the Year Award 2010:

"The NTNU Museum of Natural History and Archaeology is a university museum with natural and cultural history collections. The museum has research and management responsibility in archaeology and biology in Central Norway. The museum has been renewed in recent years, and is now a modern research and dissemination institution linked with NTNU. The museum has a mix of long- and short-term exhibitions, which are continually renewed. This year, the Kunnskapsalarm 2010 [Knowledge Alarm 2010] exhibition has been arranged in connection with NTNU's centenary and the 250th anniversary of the Royal Society of Sciences and Letters. The museum has achieved a harmonious balance between the collections of cultural history and of natural history. The museum offers extensive educational activities to the schools in Trondheim and surrounding areas. The "City, the countryside and the knowledge series" is offered to the public in the museum's vicinity, and includes a varied selection of activities from a variety of fields, with lectures, guides, seminars, and exhibitions."



The jury for the Museum of the Year award consisted of Trine Skei Grande, Member of Stortinget (chair), Gudleiv Forr, journalist, and Lene Floris, Director of Research and Exhibitions at the National Museum in Copenhagen. Museums, municipalities, and county administrations have submitted proposals, and a committee established by the Norwegian Museum Association has evaluated candidates for the award.

HM King Harald V officially opened the jubilee exhibition Kunnskapsalarm 2010 on 12 March.



Glimpses from 2010

- In 2010, 40 buildings were dendrochronologically dated – that is, by analysing tree rings in the wood.
- The oldest published dating is the stave church of Høre, in Vang in Oppland, for which timber was felled during the winter half-year of 1178–1179.
- In March, the Museum made more than 900 publications available for free on our website, and during the year these were downloaded nearly 130,000 times.
- The Museum was the pilot for the new publication tool for NTNU's website.
- More than 8000 schoolchildren have taken part in educational initiatives organized by the Schools service.
- An article about the rate of evolution in the *Sphagnum* family of mosses was published in *Evolution*.
- Only the second Norwegians in history, Professor Emeritus Kjell Ivar Flatberg has had a family of plants named after him. A peat moss in the Asian tropics has been named *Flatbergiaceae*.
- The best-selling item in the Gunnerus Museum Shop was a bouncy ball: 369 bouncy rubber balls at NOK 25 each were sold in 2010.
- In 2010, Kunnskapsbyen [the City of Knowledge] had 4240 visitors.
- In 2010, 578 hours were spent mowing the lawns at Ringve Botanical Gardens. This is the equivalent of one person doing nothing but mowing lawns every single working day from the middle of May to the end of August.
- It takes one person 12 full working days to trim the hedges in the Systematic Section of Ringve Botanical Gardens.
- The year's excavations at Torgårdsletta yielded traces of settlements, graves, and fields that provide a wealth of varied material for further research on prehistoric settlement.
- Excavations on the Berg farm in Stjørdal revealed rock art (figures of the sole of the foot, "cup marks" – figures of boats and spiral motifs) under a burial mound. The grave can probably be dated to the early Iron Age, about 500 - 1 BC
- The treeline is reaching new heights and endangering a number of vulnerable mountain species. One study shows that within a few years birch trees were able to spread from 1050 to 1320 meters above sea level after sheep grazing ended. Even low densities of sheep were enough to keep the forest in check.
- A study of the relationships between 42 chironomid species revealed that certain genes are not suitable for phylogenetic analysis of Diptera. The study was published in the journal *Molecular Phylogenetics and Evolution*.
- Almost 800 metres of good Norwegian pine planks were used to create the animal wall in the Noah's Ark exhibition.
- An advanced mass spectrometer has been procured for measuring the amount of Carbon-12 and Carbon 13, which is used in connection with ¹⁴C dating. The spectrometer can also measure other isotope ratios and is equipped with an elemental analyser for direct combustion of organic materials.