

The annual excursion of the Nordic Bryological Society (NBS) to Öland (Sweden) in 2011

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The Nordic Bryological Society held its annual meeting and excursion in 2011 during 3–5 June on the island of Öland, by the eastern coast of south Sweden. In total 23 participants attended. Beside participants from the Nordic countries, two guests from Scotland, one from the Netherlands and one from Germany attended. Despite a very dry spring, interesting mosses and liverworts such as *Seligeria oelandica*, *Mannia fragrans* (new to the island), *Athalamia hyalina*, *Moerckia flotoviana*, *Paludella squarrosa*, *Pseudocalliergon turgescens*, *Pterygoneurum ovatum*, *Tortella densa*, *T. rigens* and *Tortula modica* were observed.

The Nordic Bryological Society (NBS) located its annual meeting and excursion during 3–5 June 2011 to the Swedish province of Öland. The society has visited Öland once before (1969). This time 23 participants attended the meeting and the nationalities of participants were mixed, two came from Scotland, two from the Netherlands, one from Germany, five from Norway, two from Denmark and 13 from Sweden.

We stayed at the scientific station called ‘Station Linné’ or ‘Porten till Alvaret’ close to the small village Ölands Skogsby. Öland has a calcareous bedrock and is well known for its so called alvar habitats, that is, flat limestone pavements with a thin or absent soil layer and strong fluctuations between wet and often flooded conditions during the colder part of the year and dry summers. These habitats are known to have distinctive and interesting bryophyte flora. Holst and Lönnell (1995) provides list of bryofloristic studies from Öland.

The excursions

The weather during the period preceding the excursion had been exceptionally dry and warm. This had negatively affected much of the bryophyte flora on open soil. However, the flora in shaded woodlands, springs and fens was still luxuriant.

3 June

The first stop was made at Köpingsvik, Klinten, an open small alvar area and a north-faced steep cliff with a typical moss flora. We noted *Athalamia hyalina* and *Pseudocalliergon turgescens*.

Next, we continued a few km and stopped just before the castle of Borgholm, which is located above a north-exposed, steep precipice, shaded by big *Ulmus* trees and



Figure 1. Lunch at the parking place by Möckelmossen. 1) Karin Wiklund, 2) Niklas Lönnell, 3) David Long, 4) Leif Appeltgren, 5) Per Darell, 6) Lars-Åke Flodin, 7) Kell Damsholt, 8) Svein Olav Drangeid, 9) Fia Bengtsson, 10) Gudmund Moen, 11) Richard Åkesson, 12) Crister Albinsson, 13) Kåre Homble, 14) Arne Pedersen, 15) Kristian Hassel, 16) Per-Olof Nyman, 17) Tomas Hallingbäck, 18) Gerhard Kristensson, 19) Irina Goldberg, 20) Gordon Rothero. Photo Michael Lüth.

furnished with luxuriant moss vegetation on rocks and boulders. Here we could admire *Anomodon viticulosus*, *A. longifolius*, *Brachythecium tommasinii*, *Eurhynchium striatum*, *Porella platyphylla*, *Rhynchostegiella tenella* and *Thamnobryum alopecuroides*.

The third stop this day was at Stugbyn's Stairs, a spring fen with *Alnus* forest and well-developed swampy liverwort vegetation. Noteworthy liverworts were *Aneura "euro-maxima"*, *Trichocolea tomentella* and *Riccardia latifrons*.

By lunchtime we continued to Höghäll karst alvar (a karst alvar is an alvar habitat with deep cracks in the limestone pavement). The largest and most shaded cracks are good habitats for interesting bryophytes such as *Campylophyllum calcareum*, *Pterygoneurum ovatum*, *Homalothecium lutescens* var. *fallax*, *Schistidium brunnescens* ssp. *griseum* and *Syntrichia calcicolens*. On some soil heaps we could find *Pterygoneurum ovatum* and *Tortula modica*.

In the evening Dr. Dave Karlsson presented the scientific research at the Field Station. Thereafter, Dr Rudi Zielman (from the Netherlands) gave a lecture about the mapping scheme of the Dutch Bryological and Lichenological Society.

4 June

The second day was devoted to the northernmost part of the island. The first stop was at the seashore by Hunderum, where water is percolating over sun-exposed limestone pavement. This site is known as the type locality for *Seligeria oelandica*, described in 1928 by Sigfrid Medelius and Carl Jensen. Several persons have earlier failed to relocate the type locality; however during the pre-excursion for this NBS excursion we eventually found the species, probably at its original site. What we did not know was that a senior bryologist, and participant of the excursion, Per-Olof Nyman, in fact had retrieved the site already in 1981. Very few localities are known for *Seligeria oelandica* and it is red-listed in Sweden and several other European countries, and also included on the European red-list (Lönnell 1998).



Figure 2. Some small Pottiaceae are checked by Leif Appelgren and Tomas Hallingbäck at Köpingsvik. Foto Michael Lüth.

After the Hunderum site we were divided into two groups. One group went to the Svartvik rich fen, to look for *Paludella squarrosa* and *Moerckia flotoviana*, which they also found!

The other group went to a small alvar called Mensalvaret, known for its undisturbed flora. That group collected fine material of *Entosthodon mühlenbergii* and *E. fascicularis* as well as of *Encalypta rhaptocarpa*.

All joined again at the last site, Djupvik, which is a west-exposed calcareous precipice close to the Baltic seashore. This very steep cliff with percolating water and small caves, had thick cushions of *Gymnostomum aeruginosum* (with many sporophytes) together with *Preissia quadrata* and *Pohlia prolifera*. On the limestone wall, at least two *Seligeria*-species turned up; dominating was *S. donniana*, some patches of *S. calcarea* were also found in cracks and fissures.

In the evening the Society had its annual meeting. After the NBS meeting, Gordon Rothero gave a lecture on the hyperoceanic liverwort communities in slopes in western-most Scotland – ecology, managements and miss-management.

5 June

On Sunday we started up with a long stop at the Great Alvar by Möckelmossen, the centre of the largest continuous alvar area on the island. The alvar habitat, sometimes named limestone pavement, have many species of pottiaceae, usually best developed in early spring and late autumn, but also several thallose liverworts. The area has a distinct vascular plant flora as well as an interesting lichen flora. Bryophytes which were demonstrated included *Athalamia hyalina*, *Cinclidotus fontinaloides*, *Encalypta mutica*, *Hypnum bambergeri*, *H. vaucheri*, *Pseudocalliergon turgescens*, *Rhytidium rugosum* and *Tortella densa*, *T. fragilis*, *T. inclinata*, *T. rigens* and *T. tortuosa*.

David Long found and demonstrated fertile material of *Mannia pilosa* and by chance he also found some *Man-*



Figure 3. *Seligeria oelandica* at its type locality. Foto Michael Lüth.

nia fragrans, which was new to the province of Öland! According to Damsholt (2002) *Mannia fragrans* has a disjunct and relictual distribution in southern Scandinavia with the European distribution centre in the lower Alps. *Mannia fragrans* is known from the neighbouring province Småland and from the island of Gotland.

After lunch we went southwards to Kastlösa where we made a short stop in order to admire a rich population of *Syntrichia montana* on the church wall.

The third locality for the day was Västerstad, a forest dominated by *Ulmus minor*, with luxuriant moss flora on tree bases and logs. The forest is nearly 250 years old and the tall trees shaded the ground, which was completely covered by mats of *Eurhynchium angustirete* and *E. striatum*. At tree bases grew plenty of *Anomodon attenuatus*, *Leucodon sciuroides* and *Porella platyphylla*. Along a small watercourse we found *Hygroamblystegium varium* growing on stones.

The last site was the cemetery of Resmo church, where we looked for nice epiphytes on the *Fraxinus* and *Ulmus* trees. We found *Orthotrichum* spp., *Syntrichia virescens* and *S. ruralis*, side by side.

After dinner David Long gave a lecture about a project that aims to provide DNA barcodes of all British liverworts. He continued with a slide show from his latest collecting trip, to SE China.

Finally Michael Lüth showed beautiful pictures from the last years NBS excursion in the Schwarzwald Mountains (south Germany).

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