

Main points: SPIDER (*S*valbard *P*ictorial *I*nvertebrate *D*atabase and *E*ducational *R*esource) upgrade project

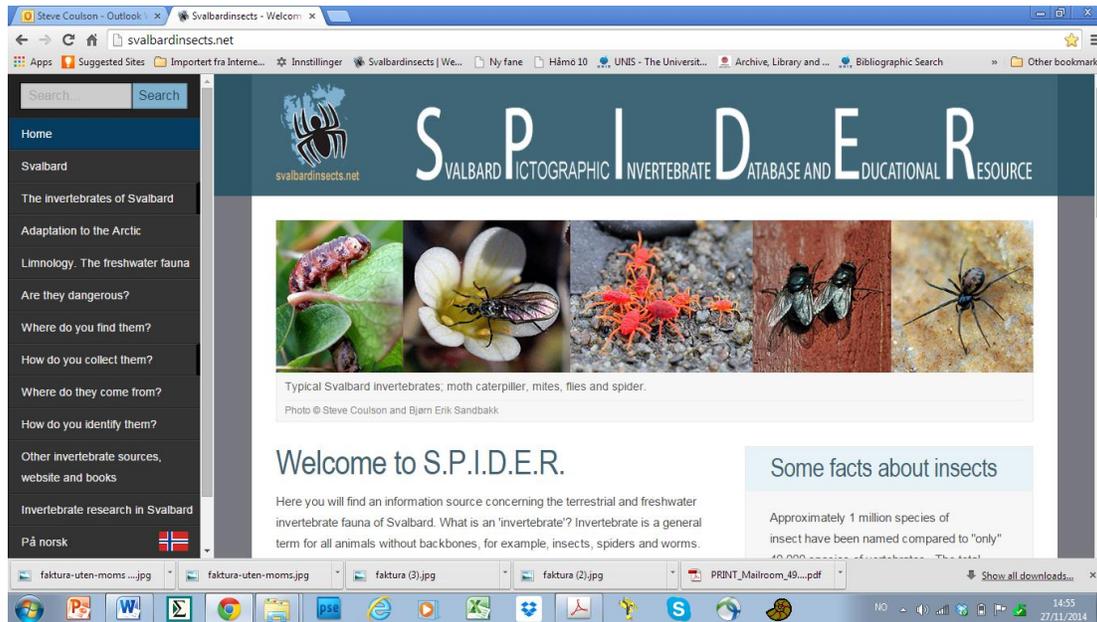


Fig. 1. Opening page of the SPIDER project.

This project, initiated in 2008, describes the great diversity amongst the terrestrial and freshwater invertebrate communities in Svalbard. Despite the large diversity, knowledge of this fauna is often limited to only the biting mosquitoes. Surprise is often expressed on learning that there are almost 1,000 species creepy-crawlies; insects, mites, spiders and so on. This includes species so far only known from Svalbard, for example two species of aphid, both being amongst the rarest insects in the world. To address this, the SPIDER project was begun. This is a webpage dedicated to the diversity of the invertebrate fauna in the Arctic including, for example, how they survive the Arctic environment frozen nine months each year in the ground, where they come from, and how you observe them.



Fig. 2 Soil animals

This project has upgraded the SPIDER to be compatible with the main net browsers and has translated the English language pages into Norwegian.

The website is constructed around a series of easy to navigate drop down menus accessible from all pages.



Primary pages are:-

-  Home
-  Svalbard
-  Invertebrates of Svalbard
-  Adaptation to the Arctic
-  Limnology. The freshwater fauna
-  Are they dangerous?
-  Where do you find them?
-  How do you collect them?
-  Where do they come from?
-  How do you identify them?
-  Other invertebrate sources, websites and books
-  Invertebrate research in Svalbard

Where appropriate there are sub-pages within each topic.

Topics covered include:-

-  What invertebrates inhabit the Svalbard archipelago?
-  How many are there?
-  What do these animals actually do? Why are they important?
-  How many species are unique to Svalbard (endemic) and why are these species so special?
-  How do these animals tolerate nine months of the year frozen in the ground and complete their lifecycles in the short cool two summer months?
-  How do flightless animals less than 1 mm long travel across at least 800 km of Arctic ocean?



Fig. 3. Aphid on mountain avens (reinrosa). This aphid is one of the rarest insects in the world and is only known from a few locations in Svalbard. Not been observed anywhere else in the world

-  How do these animals survive exposure to -40°C or survive over four years at -20°C?
-  Is it true the mosquito arrived with phosphate miners in 1918?
-  Is there a difference in the faunas between the east and west coasts of Svalbard?
-  What effects will climate change have?
-  Guidance on how to collect and observe the these animals



Figs 4 and 5. Left. Soil mite. Common throughout Svalbard. Small, only around 0.5mm in length but with a lifecycle of over 5 years and can attain densities of c. 10,000 per square metre. Right. Collembola (spretthale). Small animals related to insects. Common in soils throughout Svalbard. Over 60 species known from the archipelago and often in densities of greater than 200,000 individuals per square metre.