

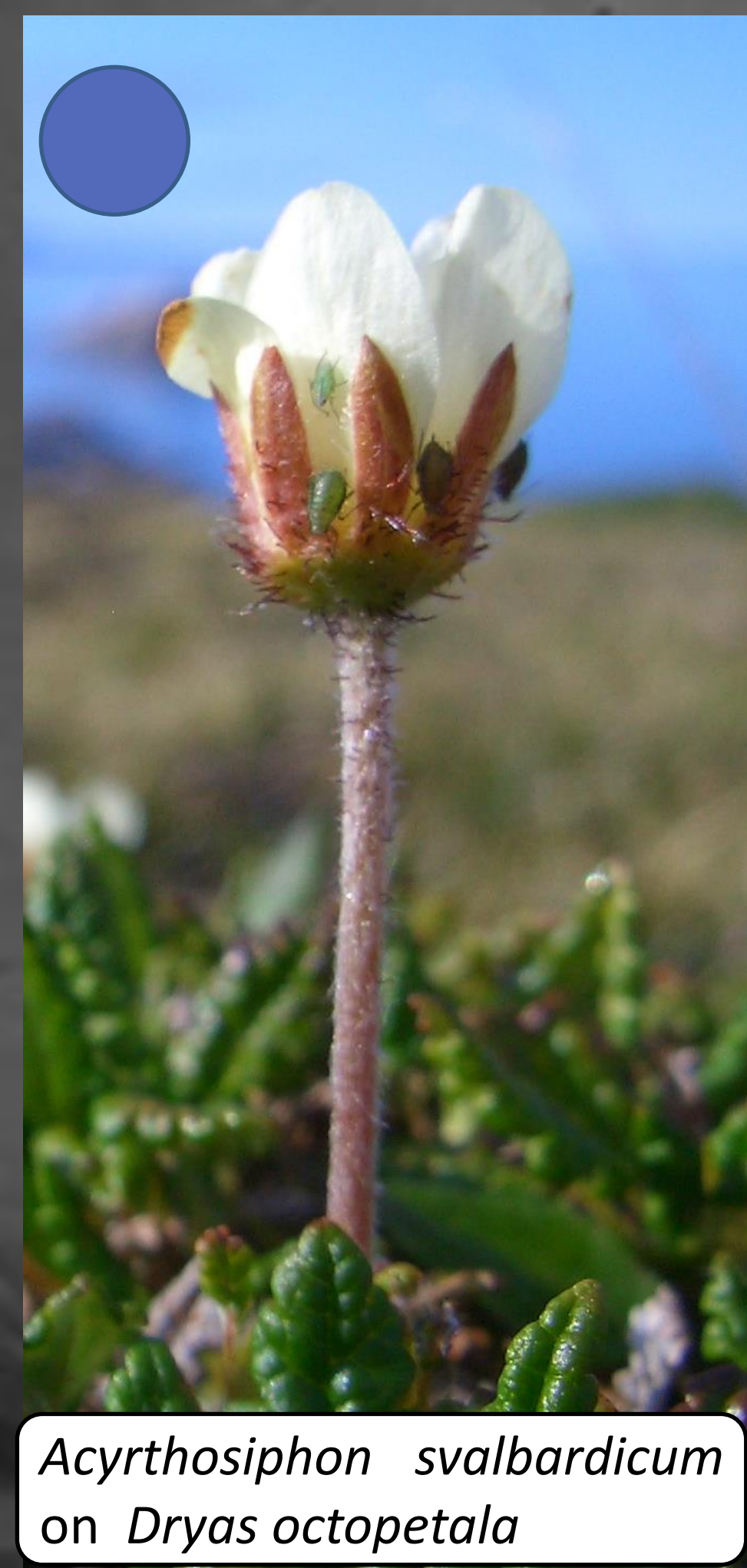
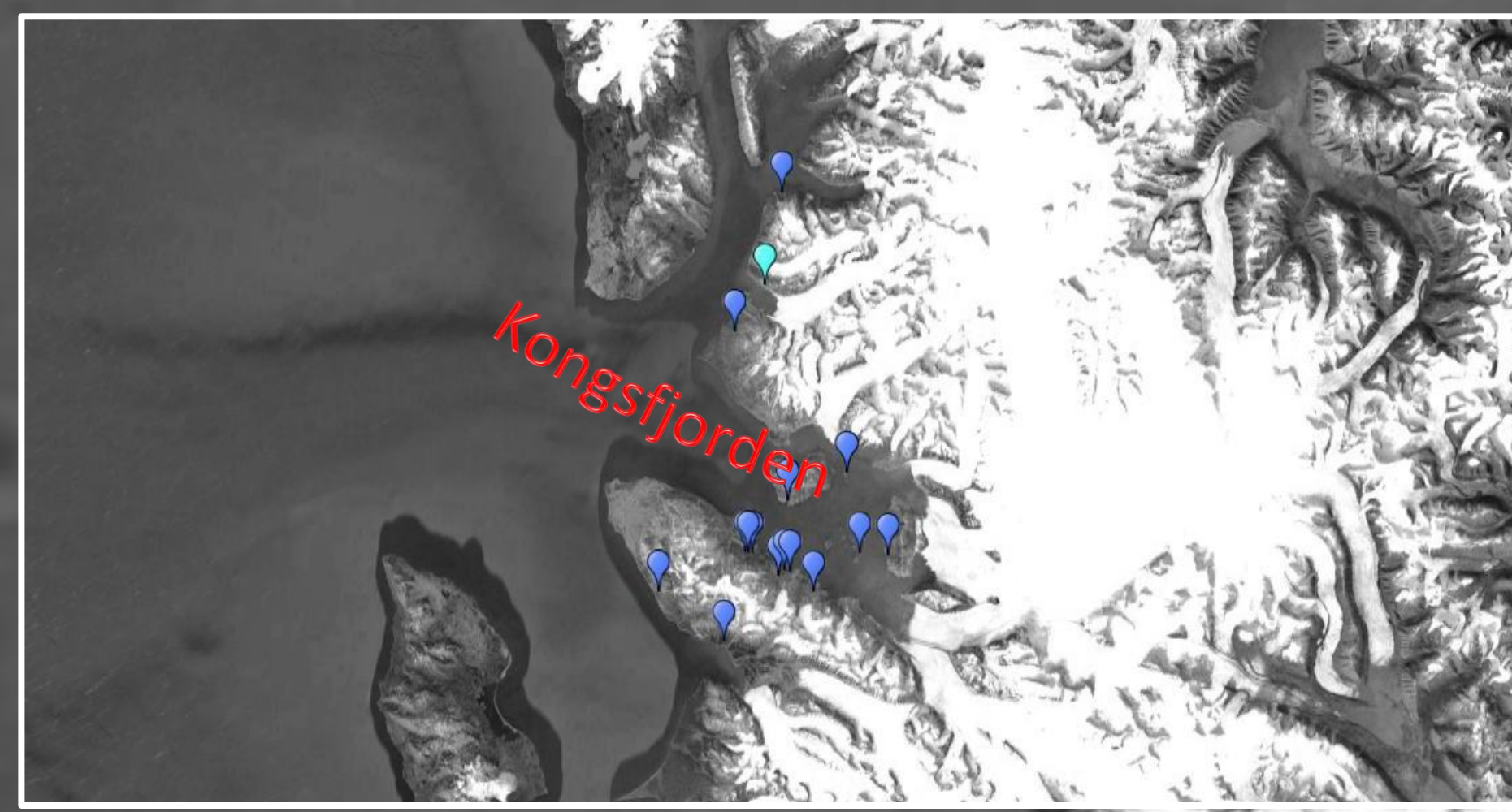
High Arctic endemic aphid species in the Svalbard Archipelago and their distribution based on the published and unpublished field data

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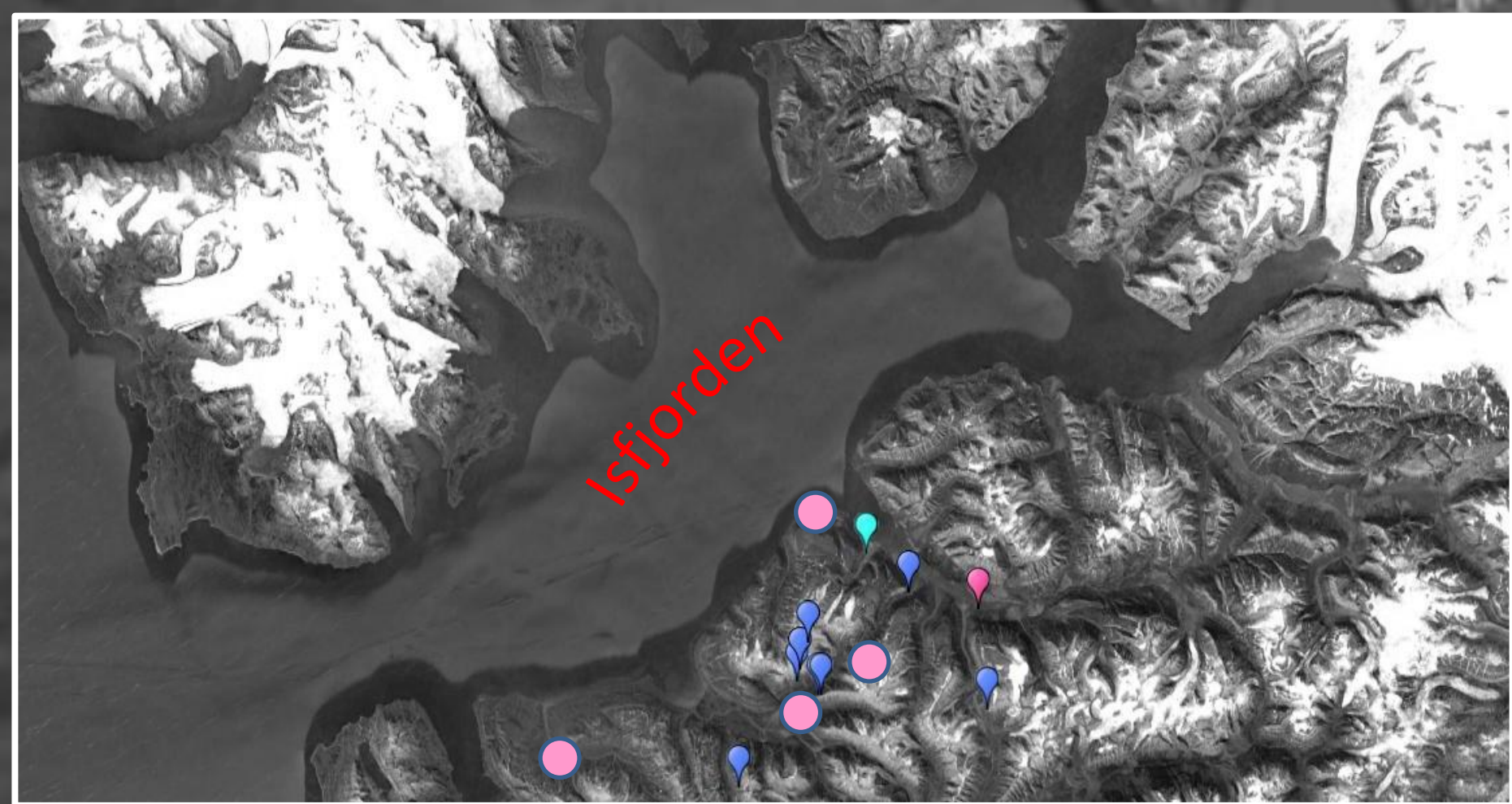
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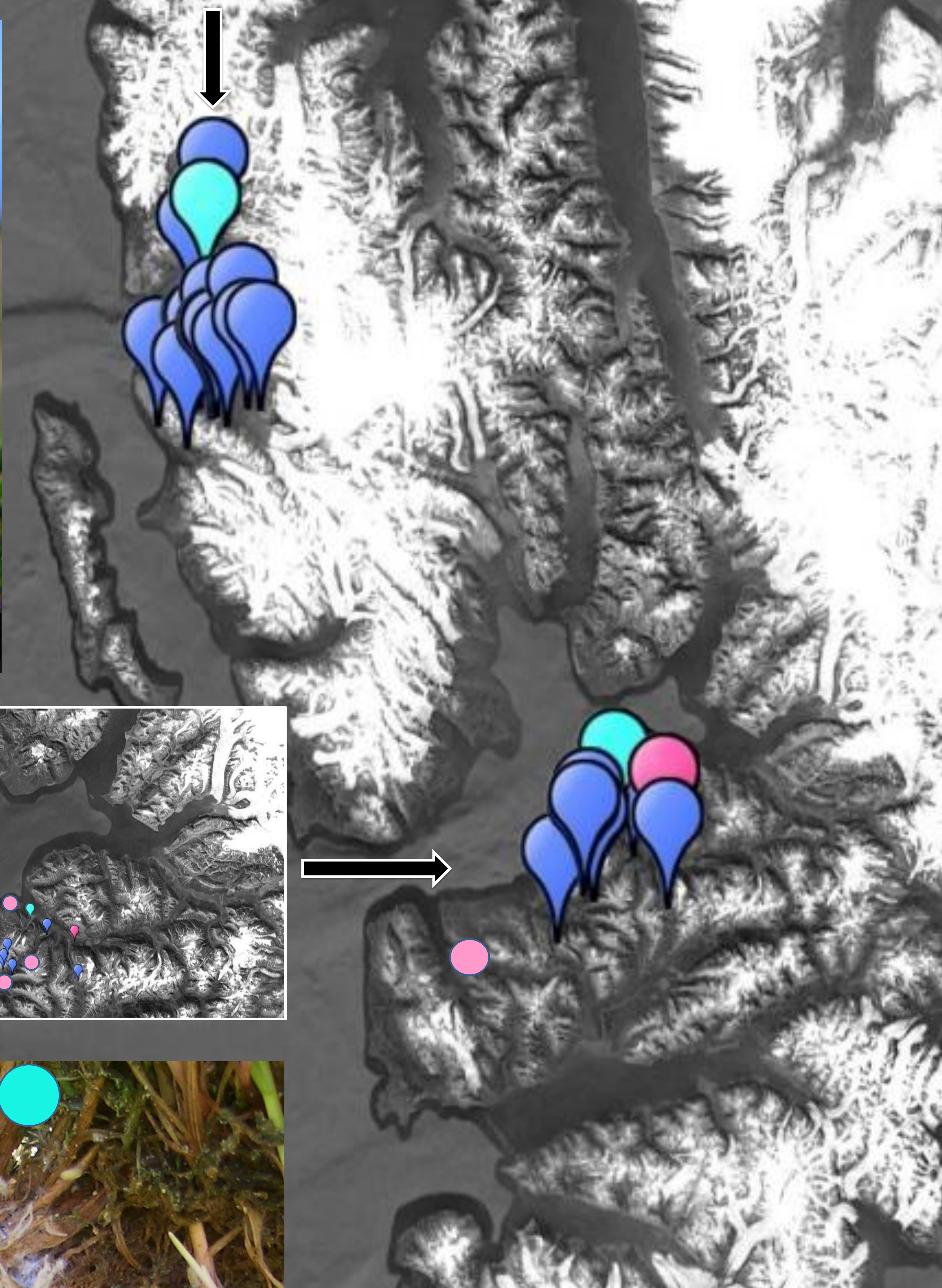
Acyrthosiphon svalbardicum
on *Dryas octopetala*



Sitobion (Metobion) calvulum
on *Salix polaris*



Pemphigus sp. under flat
stones with *Poa* roots



Adventdalen – place of collection of *S. (M.) calvulum*



Endalen – place of collection of *A. svalbardicum*



Brøggerhalvøya – place of collection of *A. svalbardicum*



Fjortende julibukta – place of collection of *Pemphigus* sp.

Endemicity is especially common among Arctic aphids. Some globally rare Arctic endemic species, have highly restricted distribution in Svalbard Archipelago, which lies in the European High Arctic (78N, 15E).

Sitobion (Metobion) calvulum Ossiannilsson, associated with the polar willow *Salix polaris*, despite extensive searches, is known only from a few scattered localities adjacent to the inner parts of the Isfjorden – Svalbard's second longest fjord, on the western coast of Spitsbergen. Specifically, the species was collected in large, open valleys in the southern part of Isfjorden: Sassendalen, Adventdalen, Colesdalen, Grøndalen and the vicinity of Longyearbyen (Vestpynten), Nordenskiöld Land on Spitsbergen.

Acyrthosiphon svalbardicum Heikinheimo, feeding on the mountain-avens *Dryas octopetala*, more locally abundant, is distributed along Brøggerhalvøya – a peninsula on the southern side of Kongsfjorden, Oskar II Land on Spitsbergen. Single locations are known from Midtholmen and Storholmen, small islets within Lovénøyane scattered in the Kongsfjorden as well as the northern part of the fjord. The species was also collected in southern part of Isfjorden: Endalen, Colesdalen and the vicinity of Longyearbyen.

The third, probably endemic for Svalbard archipelago species, belongs to the genus ***Pemphigus***, is known from Longyearbyen (Isfjorden) as well as Fjortende julibukta, in the eastern side of the outer part of Krossfjorden, southernmost tip in Haakon VII Land on the Spitsbergen.

Many of the locations that the aphids have been found at are those commonly visited. There are many regions where the aphids may be present but simply have not been recorded – especially for the root feeding *Pemphigus* species.