

# First records of the gall mite *Cecidophyopsis psilaspis* (Nalepa, 1893) (Acari, Eriophyidae) from Norway

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Haarder, S. 2023. First records of the gall mite *Cecidophyopsis psilaspis* (Nalepa, 1893) (Acari, Eriophyidae) from Norway. *Norwegian Journal of Entomology* 70, 97–100.

The gall mite *Cecidophyopsis psilaspis* (Nalepa, 1893) (Acari, Eriophyidae) is reported from Norway for the first time, based on four records from *Taxus baccata* L. (common yew) in Southern Norway in 2019 and 2021. Brief comments on general distribution, identification, hosts and expected range in Norway is given. The gall morphology and the adult male is illustrated.

Key words: Acari, Eriophyidae, *Cecidophyopsis*, new record, Norway.

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## Introduction

The gall mites (Acari, Eriophyidae) are a family of phytophagous mites. Adult mites are usually less than 0.2 mm long and only have two pairs of legs – the latter feature is only found in the superfamily Eriophyoidea. Many eriophyid species feed on leaves without causing any visible harm to their plant host. A number of species are, however, capable of inducing galls on plants. These galls can be quite distinct and conspicuous – e.g. the well-known galls of the nail gall mite (*Eriophyes tiliae* Pagenstecher, 1857), which can be found on various species of lime (*Tilia* spp.) – or can be discrete and hardly noticeable (felt patches, leaf margin rolls etc). Some gall mite species cause considerable damage in agriculture and horticulture and have attained pest status (Walter *et al.* 2008).

Gall mites have been relatively poorly studied in Norway. The most significant contributions to the field were by the plant pathologist Jacob (Jac) Fjelddalen (1908–2002). He published two papers on gall mites and listed, in total, 64 species from

Norway (Fjelddalen 1995, 1996). Furthermore, a recent study was devoted to the little-known fauna of phytophagous mites on Svalbard (Kiedrowicz *et al.* 2016). Currently, 76 gall mite species are known from Norway (Artsdatabanken 2023a), which is somewhat less than the number of species reported from Sweden (253 species; Artfakta 2023a), Finland (248 species; FinBIF 2023a) and Denmark (121 species; Arter 2023).

The gall mite *Cecidophyopsis psilaspis* (Nalepa, 1893) induces small bud galls on different species of yew (*Taxus* spp.), especially common yew (*Taxus baccata* L.). This gall morphotype is also seen in congeners such as *Cecidophyopsis ribis* (Westwood, 1869) on *Ribes nigrum* L. and *C. malpighianus* (Canestrini & Massalongo, 1893) on *Laurus* spp., but a variety of gall types are known to occur in the genus (Marinković *et al.* 2019). The species is widely distributed in Europe and has also been reported from the Nearctic realm (USA and Canada) (Marinković *et al.* 2019; Ellis, 2020 and references herein). The original description was based on material from England. The morphology has been investigated

in detail by Marshall *et al.* (1998) and Marinković *et al.* (2019). The latter provided a morphological redescription of the species supplemented by DNA sequences. Aspects of the biology and phenology of *C. psilaspis* has been studied in Canada on Pacific yew (*Taxus brevifolia* Nutt.) (Marshall & Clayton 2004).

This paper presents the first records of *Cecidophyopsis psilaspis* (Nalepa, 1893) on *Taxus baccata* L. (common yew) from Norway

## Records

### *Cecidophyopsis psilaspis* (Nalepa, 1893)

(Figure 1, 2 and 3)

**Material. Telemark coastal (TEY),** Porsgrunn: Porsgrunn city [N 59.144389, E 9.656561], EIS 18, galls on *Taxus baccata* L., 16.VI.2019, leg. S. Haarder; **Akershus (AK),** Oslo: Oslo city [N 59.917650, E 10.758509], EIS 28, galls on *Taxus baccata* L., 19.VI.2019, leg. S. Haarder; Oslo: Botanical Garden [N 59.917650, E 10.758509], EIS 28, galls on *Taxus baccata* L., 27.VII.2021, leg. S. Haarder; Ullensaker: Gardermoen [N 60.193387, E 11.096331], EIS 37, galls on *Taxus baccata* L., 29.VII.2021, leg. S.

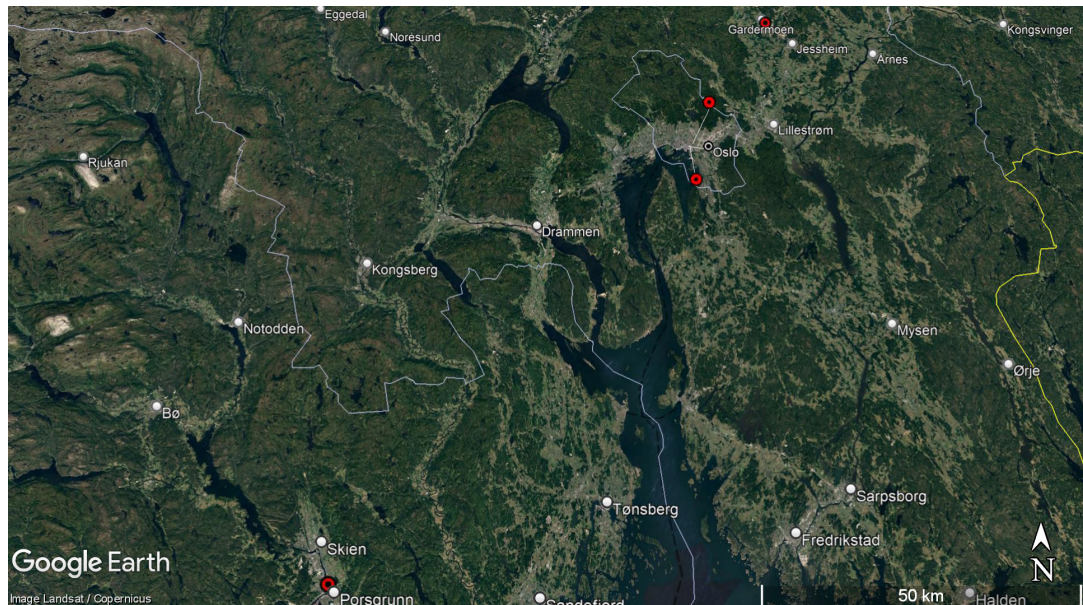
Haarder.

**Remarks.** Voucher specimens of *C. psilaspis* galls and mite specimens are kept at University of Bari, Italy (2019 samples) and Naturhistorisk Museum, Oslo, Norway (2021 samples).

## Discussion

Galls of *Cecidophyopsis psilaspis* were found in several urban habitats in southern Norway. The species has hitherto not been reported from Norway. In Denmark, *C. psilaspis* was first found in Copenhagen in 2012 and is currently widely distributed with 46 known localities (Bruun & Soika 2013, Naturbasen 2023). It has been known from Sweden (Malmö) since 1953 and is also reported from Öland, Gotland and Karlstad (Artfakta 2023b, Coulianos & Holmåsén 1991, Wahlgren 1953); the latter locality is only around 160 km from Oslo. The species is also found in the Åland archipelago of Finland (Coulianos & Holmåsén 1991). The presence of *C. psilaspis* in Norway was therefore expected.

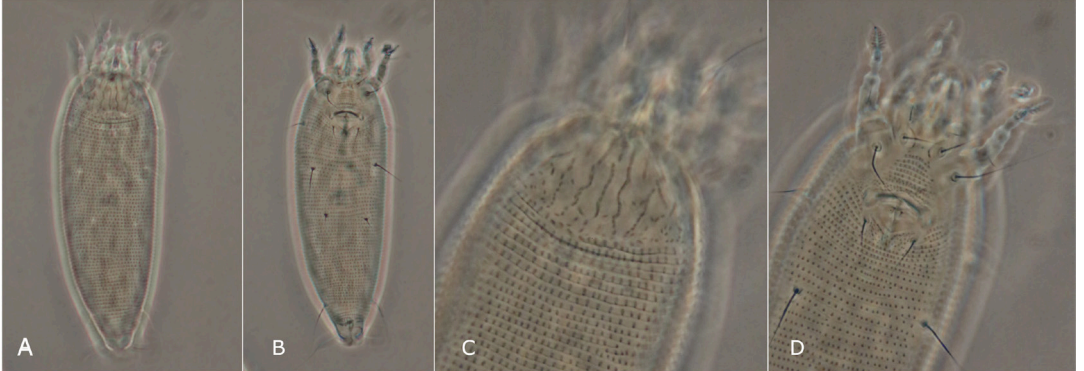
The plant host *Taxus baccata* L. (yew in English, barlind in Norwegian) is widely distributed but not common in the wild in southern



**FIGURE 1.** Distribution map of *Cecidophyopsis psilaspis* (Nalepa, 1893) in Norway. Localities are marked with a red dot.



**FIGURE 2.** Gall of *Cecidophyopsis psilaspis* (Nalepa, 1893) on *Taxus baccata* L. in Porsgrunn.



**FIGURE 3.** Male of *Cecidophyopsis psilaspis* (Nalepa, 1893). **A, B.** Habitus, dorsal and ventral view, respectively. **C.** Dorsal view, prodorsal shield. **D.** Ventral, coxigenital region.

Norway (Artsdatabanken 2023b). However, cultivated yew belonging to this and related species are commonly found in gardens and parks in cities and villages in southern Norway. The galls of *C. psilaspis* can be quite inconspicuous, which has probably led to this species being overlooked. Another gall-inducer, the gall midge *Taxomyia taxi* (Inchbald, 1861), also occurs on yew and produce somewhat similar, artichoke-like galls (Skuhrava 2021). This species has been reported

from Stavanger in 1948 (Leatherdale 1959), and has been found recently at four localities near the city Drammen. First-year galls of *T. taxi* are about the same size and shape as galls of *C. psilaspis*, so galls should be opened in order to identify the gall-causer. Further, male yew flowers bear a superficial resemblance to galls of *C. psilaspis*.

A dedicated search effort would be needed in order to determine the true distribution of *C. psilaspis* in Norway. The galls of *C. psilaspis* are

present on yew throughout the year as the plant host is evergreen. This makes for an attractive model to study life-cycle dynamics – e.g. seasonal variations of different mite stages, inquilines and parasites. The life cycle has been studied in detail in Canada on pacific yew, *Taxus brevifolia* Nutt., but no studies have, to my knowledge, been performed in Europe on *T. baccata*. It is my hope that this paper will serve as an inspiration for future studies on the gall fauna of yew in Norway, including *C. psilaspis*.

**Acknowledgements.** I wish to thank Hallvard Elven (Naturhistorisk Museum Oslo, Norway) for inviting me to join the Norwegian Gall Midge Project and for constructive feedback on the manuscript. Enrico de Lillo (University of Bari, Italy) is thanked for identifying and photographing adult specimens.

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Received: 30 April 2023  
Accepted: 16 May 2023