

Reflections on the description of *Glischrochilus tremulae* Clayhills, Audisio & Cline 2016 (Coleoptera: Nitidulidae) from Finland, with new information on its distribution

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Due to unexpected mistrust between the two senior authors, the original description of *Glischrochilus tremulae* Clayhills, Audisio & Cline 2016 came to include some mistakes and errors concerning the collection areas and methods. The misleadingly flat original habitus picture 2 is replaced here with appropriate photos of the new species, and the strangely confused text to pictures 12–13 is corrected. Older unrecognized records of the new species from Finland are listed.

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Introduction

During our mapping of the Coleoptera fauna in South-Easternmost Finland, mostly using cross window traps on dying or dead aspens (*Populus tremula*) in sunny habitats, we found specimens of the genus *Glischrochilus* (sensu stricto) that did not fit to the common *G. quadripunctatus* (Linnaeus, 1758). The specimens proved to belong to an undescribed species that was named as *G. tremulae* Clayhills, Audisio & Cline, 2016 (Clayhills et al. 2016).

Due to unexpected mistrust between the two senior authors, the original description of *Glischrochilus tremulae* Clayhills, Audisio & Cline 2016 came to include, besides the misleading habitus picture, some mistakes and errors concerning the collection areas and methods.

On the material and methods

The first specimens were recognized from traps in *Kl*: Parikkala, Kolmikanta during the year 2012, all in all 5 specimens. Two paratypes are in CAR (see Table 1 for collection code



Fig. 1. Base of the living aspen in Joutseno Monnonmäki with one of the cross window traps used in the mappings. Photo T. Clayhills.



Fig. 2. The newly dead aspen at the type locality, Varsakallio area in Joutseno. Photo T. Clayhills.



Fig. 3. Photo of a male *G. tremulae* Clayhills, Audisio & Cline, 2016. Photo by Veikko Rinne, University of Turku.



Fig. 4. A female of *G. tremulae*. Photo by Veikko Rinne, University of Turku.

explanations), one paratype in CJV and the remaining two should be in CTC but are still missing. The next 3 specimens, 2 males and 1 female, were collected in *Ka*: Lappeenranta (Joutseno), Monnonmäki in 2012 on a living aspen in a spruce dominated forest. The aspen had a big hollow at the base (Fig. 1). Three paratypes were designated from this lot, of which 2 are in CAR and 1 in CTC. Other type specimens, including the holotype, were caught in 2012 in *Sa*: Lappeenranta (Joutseno), Varsakallio on a newly dead big aspen in a xerothermic habitat (Fig. 2). In 2013–2014 many specimens were caught at several places in the Joutseno municipality. Most of them were found on two big aspens close to each other at the Varsakallio site. One of the aspens was the same tree sampled in 2012; the other was about ten meter away and still alive, but suffering from heavy loss of dead bark and emitting the typical smell of decaying aspen bark and cambium.

Table 1. Abbreviations of collections in this paper

CAR	P. Audisio's collection, Zoological Museum, Sapienza University Rome, Italy
CJV	J. Vilén's collection, Hämeenkoski, Finland
CTC	T. Clayhills' collection, Parainen, Finland

The newly sequenced specimens of *G. quadripunctatus* and *G. hortensis* were freshly collected in the field. All specimens of the new species, *G. tremulae*, were sorted out from window trap material preserved in a salt and detergent solution and kept in a freezer for about half a year. After sorting the specimens were placed in 96% ethanol.

About the description

The description of the new species is well done. Genital characters are, especially for small specimens, the only reliable way to separate *G. tremulae* from *G. quadripunctatus*. Features of the female spermatheca are not always as clear as in the picture. Small females can be very difficult to separate at times. In the description part of the 2016 publication the habitus picture of *G. tremulae* is far too flat. It never looks like that, not even small specimens of *G. quadripunctatus* is that flat but clearly more convex almost to the suture. The new species is convex up to the elytral suture (Figs. 3–4). A trained coleopterist can recognize this character in nature with naked eye with the exception of the smallest (+/- 4.5 mm) specimens.

All these mistakes and errors could have been avoided easily if I had been given the possibility to read and correct the latest manuscripts which I was not, even after repeated requests.

The distribution in Finland

Thanks to the help of many active Finnish entomologists, I have older finds of *Glischrochilus tremulae* to report. The oldest known specimen was taken from *Ks*: Kuusamo, Oulanka in 1982 (Jyrki Muona leg.). The next ones are from *Kb*: Lieksa, Jongunjoki, one specimen in 1990 on a birch snag (Ilpo Rutanen leg.), and one other from *Sb*: Suonenjoki in

1993 (Petri Martikainen leg.). In 2008 many new finds were made in different parts of Finland. So far the westernmost find is from *N*: Sipoo, Rörstrand from traps on aspen (three specimens in 2008, Seppo Karjalainen leg.). One specimen was collected from *Ka*: Joutseno, Kuurmanpohja already in 2008 on a birch snag with fungi (Eero Helve leg.). In the same year *G. tremulae* was found in traps on aspen from *Kb*: Lieksa Siniwaara, *Sa*: Rantasalmi Linnasaari, and *Ta*: Kuhmoinen Isojärvi by Jaakko Mattila. In 2009 the species was trapped in *Ta*: Heinola, Mielas on aspens and in 2011 from *Ta*: Jämsä, Edesalo likewise on aspens and by Jaakko Mattila. In all these cases the material consists of several specimens. It seems probable that the species arrived to Finland from Russian taiga forests in the 1970s or 1980s through the central parts of Eastern Finland (*Ks–Kb*) and is spreading in all directions. This can be seen by the finds from *Sa*: Kouvola, Repovesi in 2011 and *Kl*: Parikkala Siikalahti in 2013 (Seppo Karjalainen leg.) and the so far northernmost find from *Obb*: Rovaniemi, Pisavaara in 2016 (Mikko Pentinsaari leg.). The last listed records are all based on single specimens trapped on aspen. The main increase of the distribution area occurred in the beginning of the new millennium and it is most certainly still going on.

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References

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