

Entomologische Notiz

Cymbalophora pudica (ESPER, [1785]) in Switzerland (Ticino) — former occurrence apparently confirmed by rediscovered historic specimen in private collection (Lepidoptera: Erebidæ, Arctiinae)

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10555. [species number following KARSHOLT & RAZOWSKI (1996)] *Cymbalophora pudica* (ESPER, [1785]: 177) is often discussed to have been a part of the fauna of Switzerland. Several doubtful records are known but only three were based on comprehensive and probably reliable data. Now we present a further specimen discovered in a historic collection. According to the label, it was collected in Locarno and apparently confirms one of the known localities. It appears to be proven now that *C. pudica* was native to Switzerland. This showy species was not found any more since 1959 in Ticino.

The history

Systematics

The species' name is often cited with incorrect publication dates. This is caused by several factors:

- Eugen Johann Christoph ESPEr himself published his works in „Lieferungen“ (published in Erlangen by W. Walther), i.e. partial deliveries of some text pages and plates, so there is a longer period over which the book was published, and
- there were supplements to all volumes with separate paging, and
- after ESPEr's death in 1810 there was a second edition of the book series by Toussaint von [originally „de“] CHARPENTIER (with additions by him), which was published 1829–1839 in Leipzig (by T. O. Weigel) and is much more commonly found in today's libraries than ESPEr's original edition. We checked a scan of the original edition kept in Göttingen via the Göttinger Digitalisierungszentrum (GDZ) in iv. 2017.

The year of publication and paging for ESPEr's description of „*Phalaena Bombyx Pudica*“, 1785, follows HEPpNER (1981: 252).

The deposition of ESPEr's type specimens of „*Phalaena Bombyx Pudica*, Weisser Braunfleckiger Spinner“ (if still existing?) is presently unknown.

Distribution

Since many years a long-term discussion is smouldering concerning the former occurrence of *Cymbalophora pudica* in Switzerland.

In the original description ESPEr ([1785]: 177) wrote about a few specimens collected by a Mr. DEVILLERS from „Lion“ (= Lyon?) from the „Savoyischen Gebürgen“. This describes an area today comprising parts of Switzerland, Italy (Piemont) and the present French Départements Isère and Ain. Therefore it is possible that even the first records might have been from Switzerland, but this cannot be proven anymore.

Over a hundred years later the occurrence in Switzerland was probably confirmed by HOFMANN (1887: 43). He wrote: „In May, June in the south of Switzerland, Styria, Dalmatia and south Europe.“ But also in this case there is no detailed locality data and no known reliably conserved specimen.

Then a few years later VORBRÖDT & MÜLLER-RUTZ (1914: 223) wrote that this species was found by GHIDINI in Switzerland (Ticino). This time data were available (Bioggio 8. vi. 1892, Muggio 6. vii. 1895, Prato).

1959 there was a further specimen found by Josef CULATTI. Location was a little northeast of Locarno (Ticino) as shown today in the internet by INFO FAUNA (2017).

Without providing data, *C. pudica* was also mentioned by, e.g., DE FREINA & WITT (1987: 138) to be found „occasionally in the southern Alps“, with their distribution map 81 also lacking details.

In contrast to these few somehow reliable data, KARSHOLT & RAZOWSKI (1996) listed *C. pudica* for Switzerland as a doubtful occurrence. This in turn seemed to be the cause for the internet website „Lepiforum“ to list the species in a „Negative Checklist“ for Central Europe (LEPIFORUM, NEGATIV-CHECKLIST FÜR MITTELEUROPA 2017). Also SAUTER & WHITEBREAD (2005: 74) did not list actual data of *C. pudica* for Switzerland („old data have not been confirmed“).

New finding

So, in total there were at least 3 apparently reliable historic specimens from Switzerland (Ticino): those 2 described by VORBRÖDT & MÜLLER-RUTZ (Bioggio 8. vi. 1892, Muggio 6. vii. 1895; both leg. GHIDINI) and one further collected by Josef CULATTI (1959, Locarno) (Fig. 3).

Recently the collection of Gaetano MONTI (including the former collection of M. WOLK) was incorporated into the collection of the first author M. WÖLFLING (in Niederwerrn, Germany). During an inspection of the newly acquired historic material we found a further probably reliable specimen of *C. pudica* with plausible data. It is labelled: „*Euprepia pudica*, Esp., Switzerland, Locarno, 10. ix. 1910, WOLK“ (Figs. 1–2). This newly discovered specimen supports the data of Josef CULATTI who has collected *C. pudica* closeby to this location.

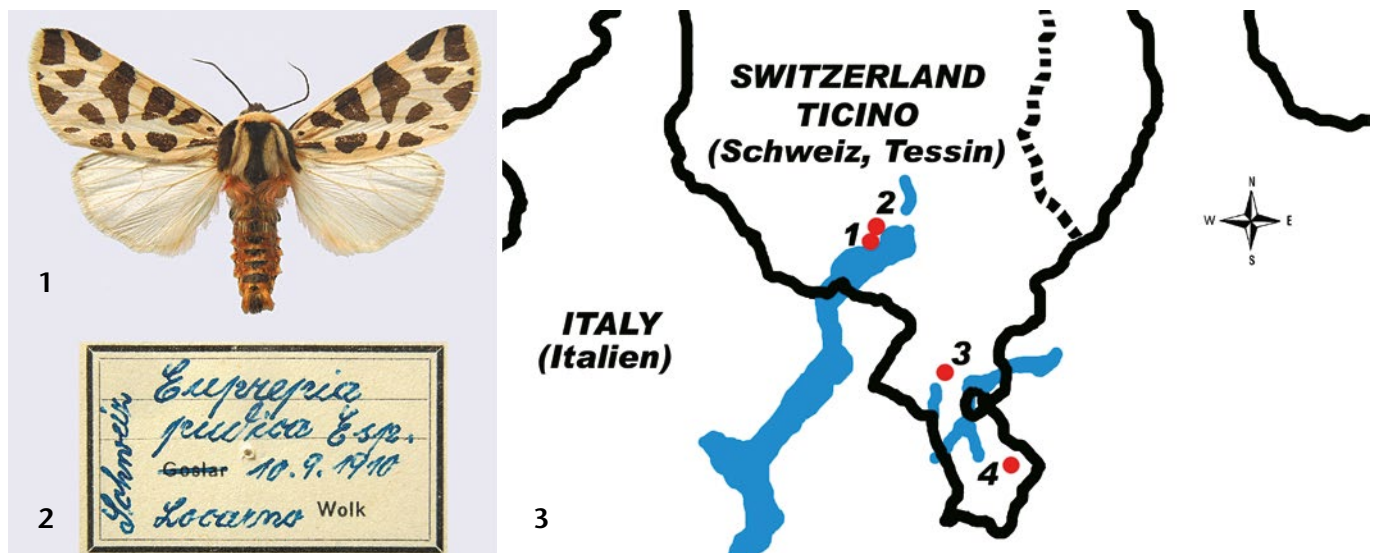
Discussion

Our new finding is important because Locarno is now confirmed as location for *C. pudica* from two independent collectors. The specimens were reported with 49 years interval (WOLK 1910, CULATTI 1959) which makes a coincidence unlikely. So all together the 4 historic records make it very likely that *C. pudica* was once a species living in Switzerland.

As there is no more material known from Ticino after 1959, the species is evidently no longer existing in Switzerland. This may have different reasons, e.g.:

- Today, Ticino is comparatively densely populated and increasingly urbanized. A native population of *C. pudica* at the northern limits of the species' distribution did not survive these large-scale habitat losses in the Ticino (TORRICELLI 2014) in the second half of the 20th century.
- Alternatively, the historic specimens might have been accidentally drifted as strays from the south into Ticino and failed to found a permanent population there.
- Whether all this may also have something to do with the actual climatic change (e.g., BARNOSKY et al. 2011, THOMAS et al. 2004) is unclear. One would not necessarily expect a southern species to disappear within a warming period, but there may be other climatic and ecological factors besides just temperature, more important for the survival of the species, which turned negative for *C. pudica*.

Ultimately, it is desirable that further historic material will be searched for in museum as well as in private collections. Also the location „Styria“ (i.e., in Austria or in Slovenia?), mentioned by HOFMANN (1887: 43) needs detailed research. Additionally it would be helpful if collectors in the Ticino put an emphasis on rediscovering this species. It cannot be excluded that there are still undiscovered living relicts. A rediscovery of a population in Switzerland (and



Figs. 1–2: This recently discovered historic specimen supports that *C. pudica* is a proven, though extinct, species for Switzerland. **Fig. 3:** The historic localities of *Cymbalophora pudica* in Switzerland: 1 = Locarno (leg. WOLK 1910) 2 = Location northeast of Locarno (CULATTI 1959). 3 = Bioggio (GHIDINI 1892). 4 = Muggio (GHIDINI 1895).

even in Austria or Slovenia?) could become important with respect to nature conservancy measures, especially to habitat protection.

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