



Enallagma Cyathigerum - Variant from a Raised Bog in Scotland

Matthias Hartung

Advisor to the Museum of Natural History Leipzig, Germany

Citation: Matthias Hartung (2026) *Enallagma Cyathigerum - Variant from a Raised Bog in Scotland*. *Int J. of Gastro Med & Res* 1(2), 1-4. WMJ-IJGMR-109

***Corresponding author:** Matthias Hartung, Advisor to the Museum of Natural History Leipzig, Germany.

Submitted: 16.05.2026

Accepted: 21.05.2026

Published: 03.06.2026

Introduction

Several individuals of *Enallagma cyathigerum* were found in Scotland in 1978. Additional blackenings were found in them, which according to Schmidt (1929) had been described as partially occurring. Also on the 2nd segments squirls were found in these drawings, which do not occur in most animals of this species. The following persons are the suppliers for other species from other localities of *Enallagma cyathigerum* from the rest of Europe. The friendly persons were Klaus Reinhardt, Saguljajev, M. Pastuchow leg. and Steffen Roth leg.

Method

The towns in the south-west of Scotland:
United Kingdom of Great Britain, Schottland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60

United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330 (u. a. *Enallagma cyathigerum*)

United Kingdom of Great Britain, Schottland, Spean Bridge, Moor Teich, bei Lòn Lèanachain, N 56.8670 - W -4.950 (u.a. *Enallagma cyathigerum*)

The data comes from a database and from an automatic summary. The pictures were all taken or drawn by the author.

Conclusion

A long ago observation is described here. I had observed *Enallagma cyathigerum* and other species in 1978 in a raised bog. Now these individuals are to be described. They differ from the other species in Europe by two or three differences in markings. According to Schmidt, 1929, a variant of *Enallagma cyathigerum* is shown, but it only partially agrees with the dragonflies from Scotland. Schmidt, 1929, had also pointed out that the additional redactions occur rarely. The other dragonfly species found in Scotland in 1978 are described.

Result

Coenagriidae

Pyrhosoma nymphula (Sulzer, 1776, Early Adonis Dragonfly), United Kingdom of Great Britain, Scotland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60, 3/1978: m, 16.07.1978, M. Hartung leg., alluvial forest, open ponds, raised bog-pond - United Kingdom of Great Britain, Scotland, Spean Bridge, bog pond, near Lòn Lèanachain, N 56.8670 - W -4.950, 4/1978: m,

21.07.1978, M. Hartung observed - 22/1978: m, 8.07.1978, M. Hartung leg. - 23/1978: w, 8.07.1978, M. Hartung leg.

Ischnura elegans (Vander Linden, 1820, Große Pechlibelle), United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330: 5/1978: w, 14.07.1978, M. Hartung leg., f. c (Schmidt, 1967), f. *infuscans-obsolata* Killington.

Enallagma cyathigerum (Charpentier, 1840, goblet damselfly), United Kingdom of Great Britain, Scotland, Spean Bridge, bog pond, near Lòn Lèanachain, N 56.8670 - W -4.950: 6/1978: m, 21.07.1978, M. Hartung leg. Ecy1978-25: f. "leanachaini" (M. Hartung): 2nd segment with extended pattern (croissant), United Kingdom of Great Britain, Scotland, Aberfoyle, N 56.150 - W -4.3330. - 7/1978: 8.07.1978, M. Hartung leg. - 24/1978: m, 21.07.1978, M. Hartung leg. ECY1978-26: 2nd segment with extended drawing (squirrel). - 25/1978: m, 21.07.1978, M. Hartung leg. ECY1978-27: 2nd segment with extended drawing (squirrel). - 26/1978: w, 21.07.1978, M. Hartung leg. ECY1978-28 - United Kingdom of Great Britain, Scotland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60, 8/1978: m, 10.07.1978, M. Hartung leg (Figure. 1, 2, 3, 4, 5, 6, 7).

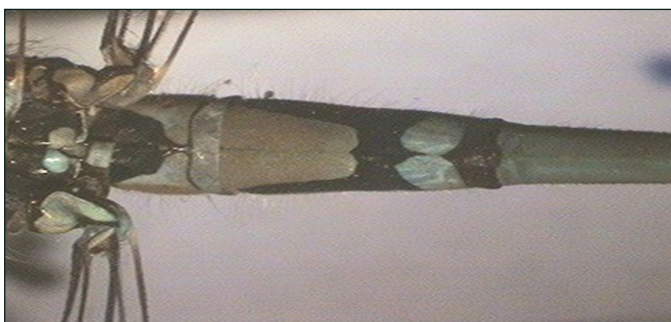


Figure 1: *Enallagma Cyathigerum*, 24/1978, Drawing on the 2nd Segment, Dorsal, Male, with Lateral Squirrels

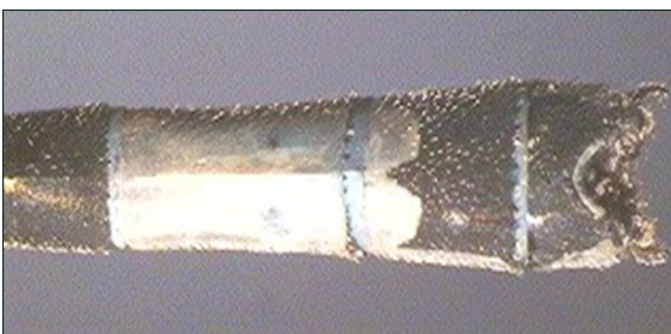


Figure 2: *Enallagma Cyathigerum*, 24/1978, Drawing on the 8th and 9th Segments, Dorsal, Male, the 9th Segment with Caudal Drawing

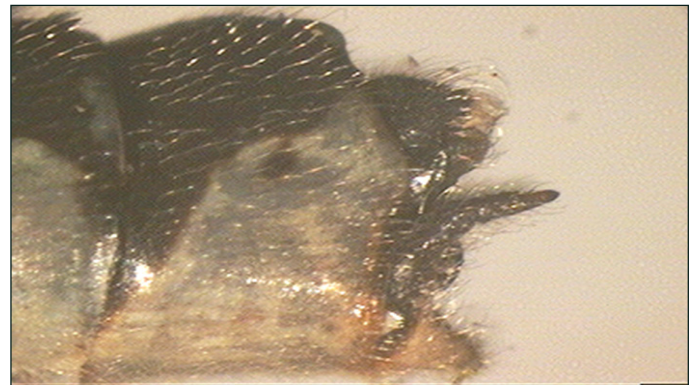


Figure 3: *Enallagma Cyathigerum*, 24/1978, Appendices am 10. Segment, Lateral, Male

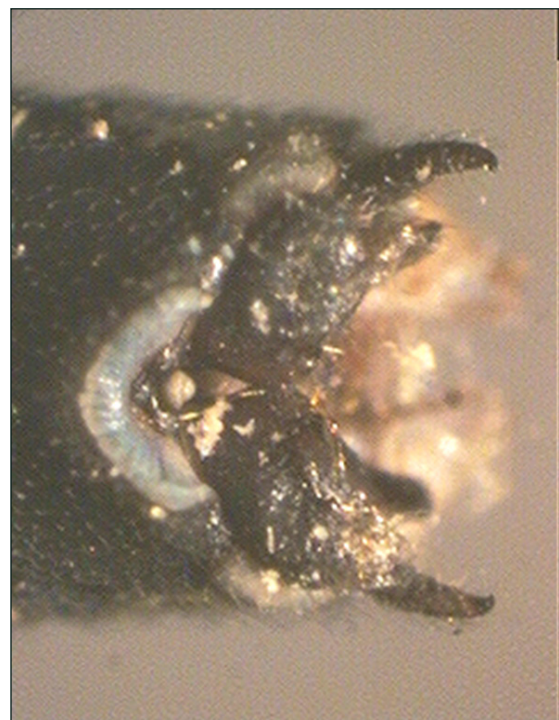


Figure 4: *Enallagma Cyathigerum*, 24/1978, Appendices am 10. Segment, Dorsal, Male



Figure 5: *Enallagma Cyathigerum*, 6/1978, Habitus, Lateral, Male und 9. Segment (dunkel)

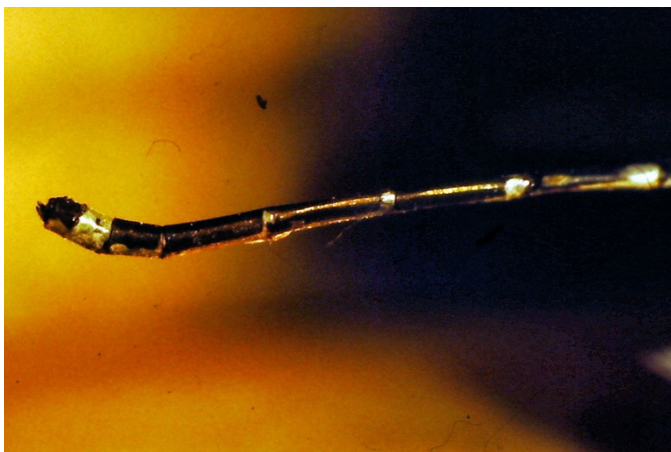


Figure 6: *Enallagma Cyathigerum*, 6/1978, Abdomen, Lateral, Male und 9. Segment (dunkel)

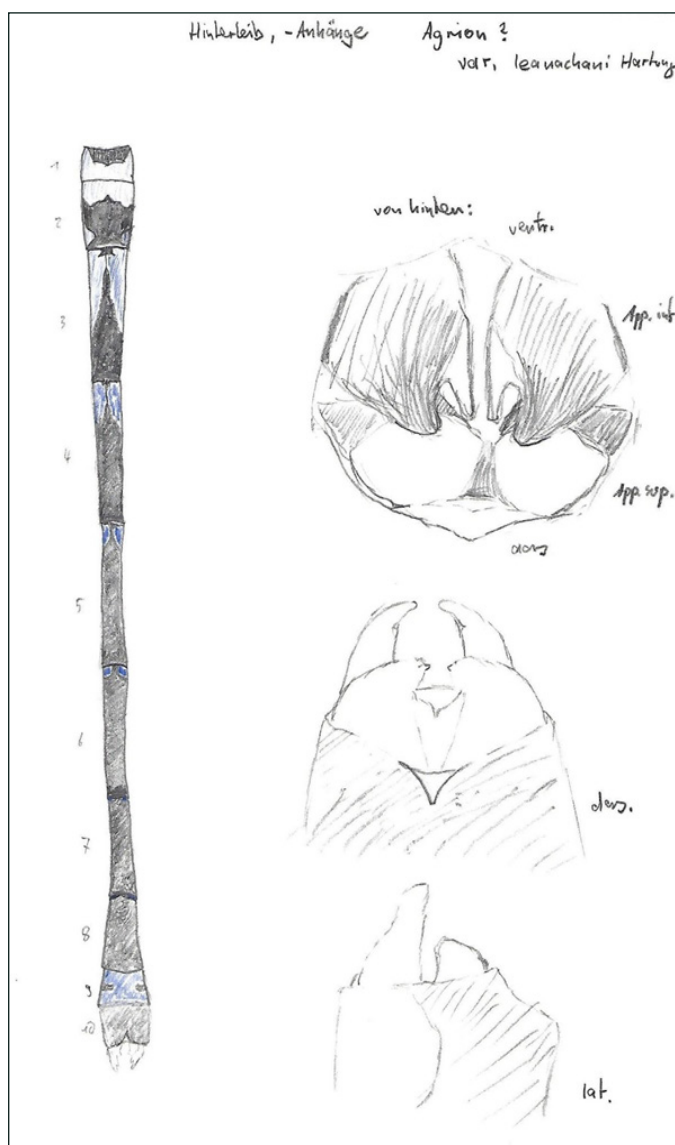


Figure 7: *Enallagma Cyathigerum*: Drawings (M. Hartung), Habitus and Appendices

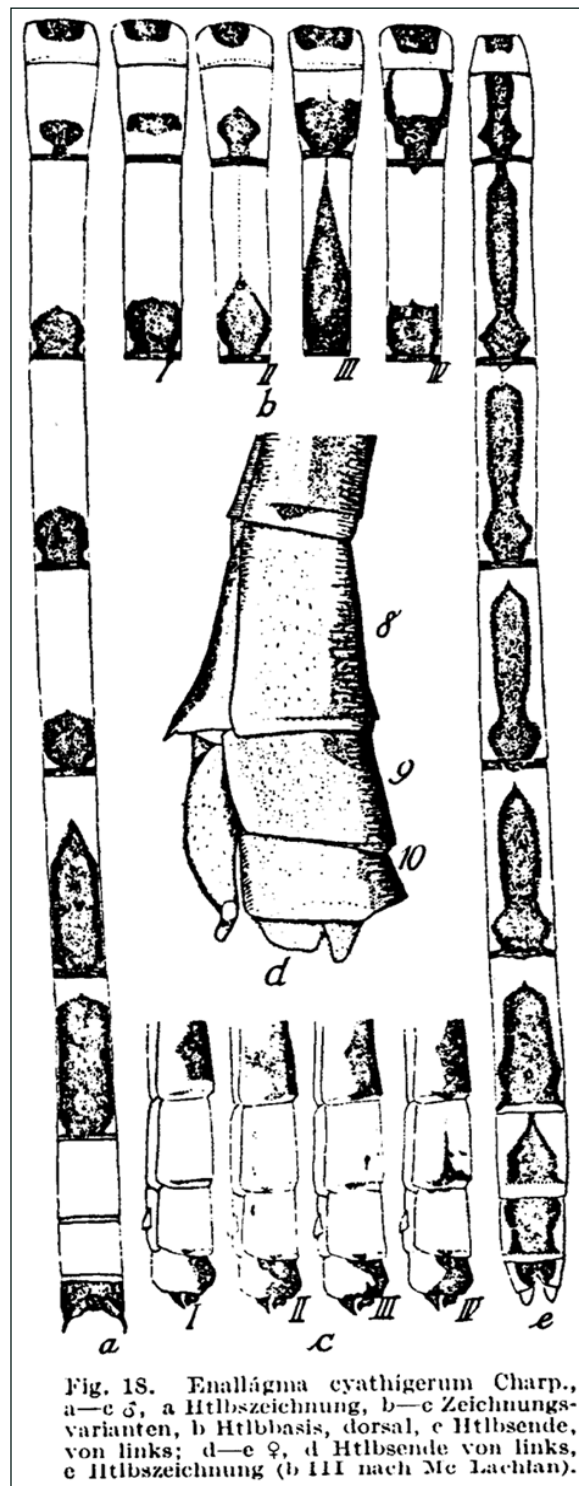


Figure 8: From Erich Schmidt, 1929, Fig. 18: b IV and c IV correspond to these forms from Scotland of *Enallagma Cyathigerum*.

Cordulegasteridae

Cordulegaster boltonii (Donovan, 1807, two-striped damselfly), United Kingdom of Great Britain, Scotland, Aberfoyle, forest, pond & stream, near Lochan Spring, N 56.1670 - W -4.3830: 17/1978: Ew, 9.07.1978, M. Hartung leg., L.: 76, Sp.: 90mm, c.50-60cm flying over water near the shore, c. 200cm, over forest. -

18/1978: m, 9.07.1978, M. Hartung leg., L.: 80, Sp.: 97mm, eggs laid, near beach "at a muddy place", United Kingdom of Great Britain, Scotland, Fort Augustus, Loch Tarff, N 57.150 - W -4.60. - 19/1978: 16.07.1978, M. Hartung observed. - United Kingdom of Great Britain, Scotland, Aberfoyle, forest, pond & stream, near Lochan Spling, N 56.1670 - W -4.3830. - 192/1978: Em, 9.07.1978, M. Hartung leg, L.: 80mm, Sp.: 97mm, Egg depos. close to the beach "in a muddy place".

Libellulidae

Sympetrum sanguineum (Müller, 1764, blood-red heather dragonfly), United Kingdom of Great Britain, Scotland, Aberfoyle, N 56.150 - W -4.3330: 14/1978: m, 14.07.1978, M. Hartung leg.

Libellula quadrimaculata L., 1758 (Vierfleck), United Kingdom of Great Britain, Schottland, Spean Bridge, Moor Teiche, bei Lòn Lèanachain, N 56.8670 - W -4.950: 20/1978: w, 21.07.1978, M. Hartung leg. L.: 47mm, Sp.: 75mm. - United Kingdom of Great Britain, Schottland, Aberfoyle, N 56.150 - W -4.3330. - 21/1978: m, 9.07.1978, M. Hartung leg.

Types

		M	W	E/L
1	<i>Pyrrosoma nymphula</i> (Sulzer, 1776)	3	1	0
2	<i>Ischnura elegans</i> (Vander Linden, 1820)	0	1	0
3	<i>Enallagma cyathigerum</i> (Charpentier, 1840)	4	0	0
4	<i>Cordulegaster boltonii</i> (Donovan, 1807)	1	0	2
5	<i>Libellula quadrimaculata</i> L., 1758	1	1	1
6	<i>Sympetrum sanguineum</i> (Müller, 1764)	1	0	0

Discussion

The form from Scotland of the species *Enallagma cyathigerum* is strongly darkened. It has a black pattern-with two horns and a base connection on the 2nd segment. Both together are rare in this species in Europe (Figs. 1-7). The appendices on the 10th segment look very similar to those of this species from the rest of Europe. The form occurs in Scotland only in the raised bog at Spean Bridge, moore pond and Lòn Lèanachain. According to Erich Schmidt, 1929, the squirrels appear in the drawing on the 2nd segment in his Fig. 18 b IV (Fig. 8), the 8th and 9th segments can also be partially or completely blackened (cf. c IV). In the animals from Scotland, however, the eighth segment is completely black. Fig. 3 and Fig. 6 show the caudal appendices of both individuals, which agree with Figure 8 [1].

The black colorations occur in species that have acidic water during development. The discoloration can also be caused by the effect of cold.

Acknowledgements: These people, Klaus Reinhardt, Saguljajev, M. Pastukhov leg., Steffen Rot, helped me to put the various individuals from Northern Europe at my disposal.

References

- Schmidt E (1929) Libellen (Odonata), in: Die Tierwelt Mitteleuropas, Insekten 1 Teil IV. Bd., Lieferung 1b. Quelle & Meyer, Leipzig, S. IV 1-66.