

**Supplementary Table 1.** Leg I. Comparison of leg muscle terminology from the literature and this study for *Hypsibius exemplaris* and closely related species. Note that labels from Müller [10] are compiled from several species. Labels are taken directly from references (from top to bottom): Müller [10] (*H. convergens*, *Ramazottius oberhaueseri*, *Macrobiotus hufelandi*), Schmidt-Rhaesa & Kulesa [11] (*Hypsibius* sp.), Smith & Jockusch [15] (*H. exemplaris*), Marchioro *et al.* [14] (*Acutuncus antarcticus*), this study (*H. exemplaris*). Question marks indicate ambiguous or missing data. See main manuscript for references.

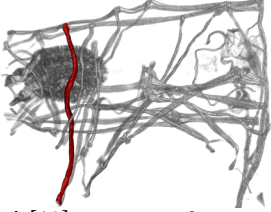
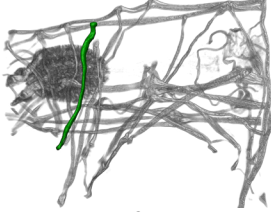
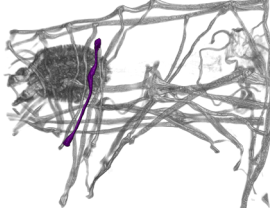
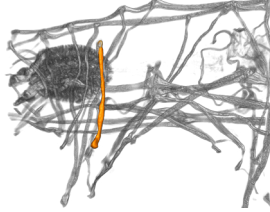
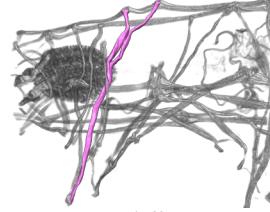
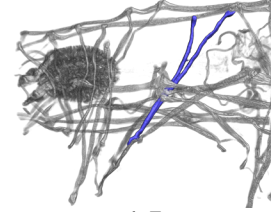
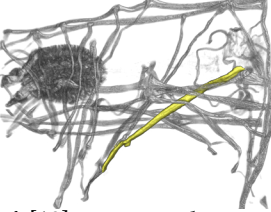
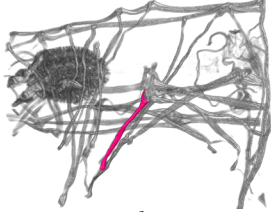
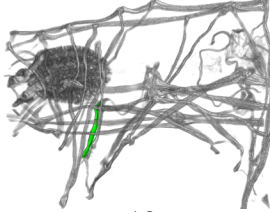
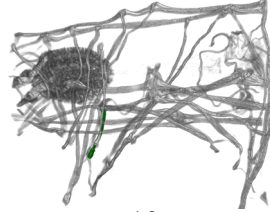
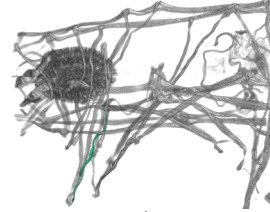
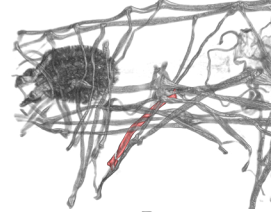
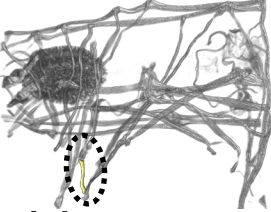
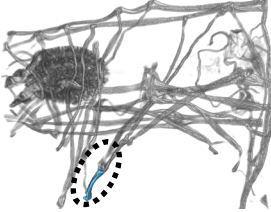
					
Ref. [10] $\delta$	3	$\epsilon$	$\epsilon$	4, 5	6, 7a
Ref. [11]      d1	e1	e2	e3	f1, g1	h1, i1
Ref. [15]      d1	e1	f*1	f*2	f1, g1	h1, i1
Ref. [14] $\delta$ -LI2	2-LI5	$\epsilon$ -LI3	$\epsilon$ -LI3	5-LI1, 4-LI4	6-LIa, 7-LIa
This study    iM1	iM2	iM3	iM4	iM5	iM6
					
Ref. [10]      l	d	A?	A?	A	B
Ref. [11]      t1	$\tau$ 1	li-a	li	?	2i
Ref. [15]      t1	$\tau$ 1	1*	li	?	2i
Ref. [14]      l-LIa + LIa-LIb	d-LIb	A-LIc	A-LIc	A-LId	B-LIb
This study    iM7	iM8	iM9	iM10	iM11	iM12
					
Ref. [10]      ?	?				
Ref. [11]      ?	?				
Ref. [15]      ?	sh				
Ref. [14]      ?	Llb (proximal point)				
This study    iM13	iM14				

Table 1 (continued). Leg II.

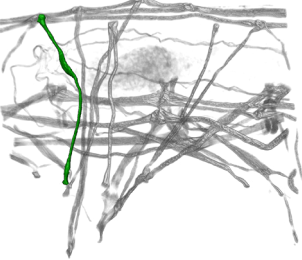
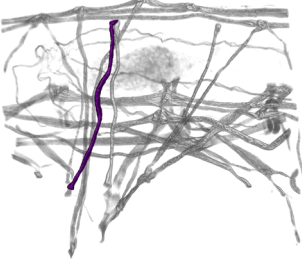
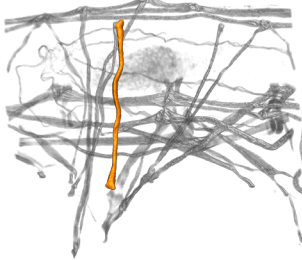
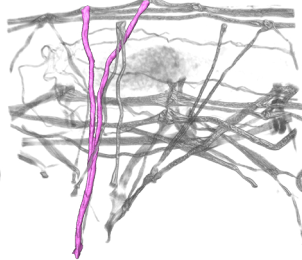
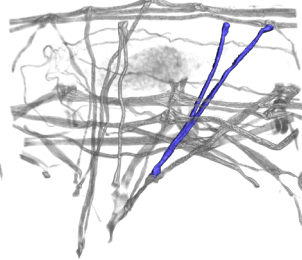
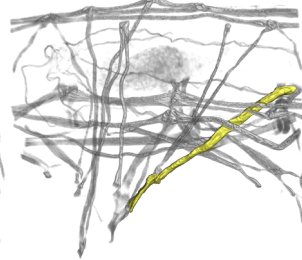
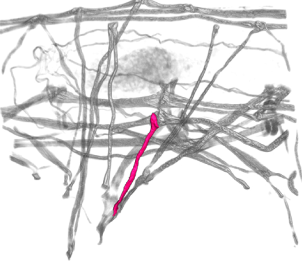
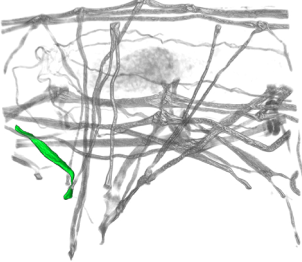
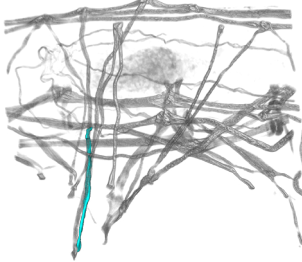
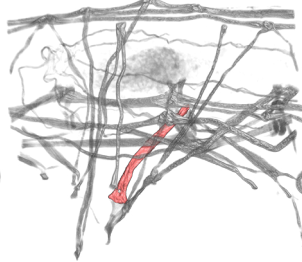
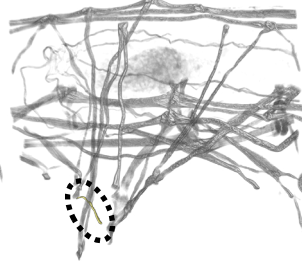
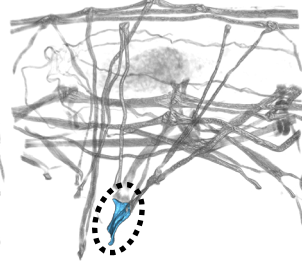
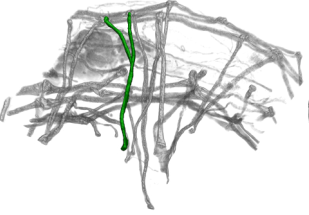
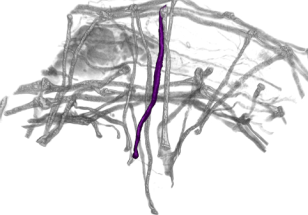
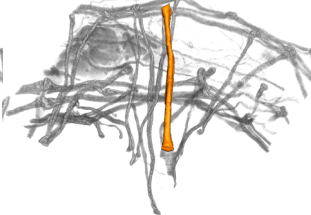
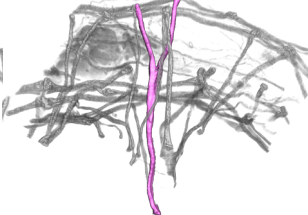
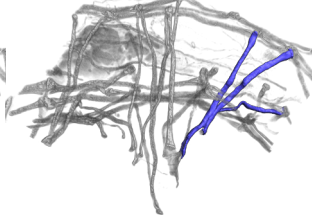
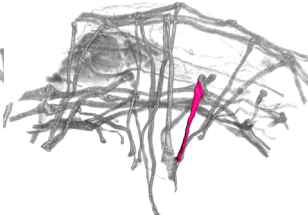
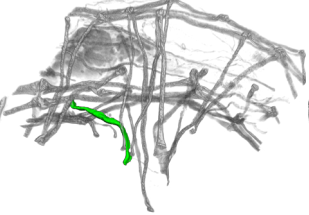
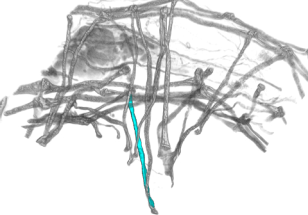
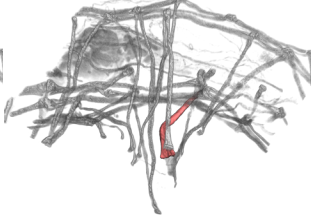
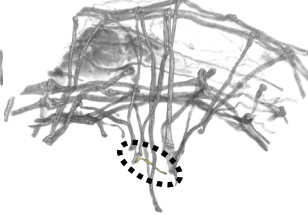
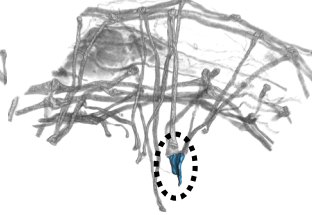
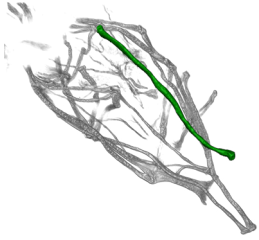
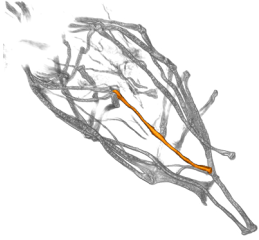
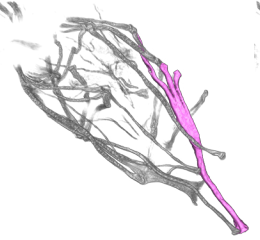
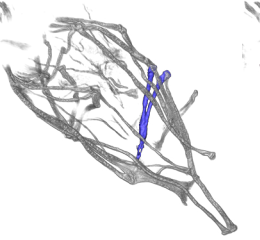
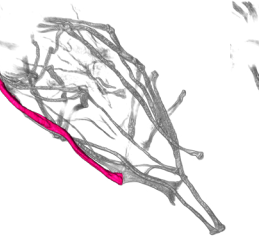
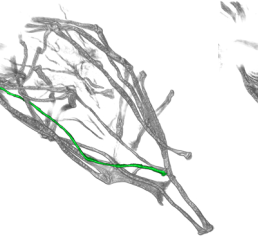
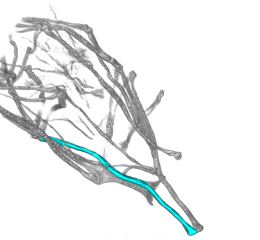
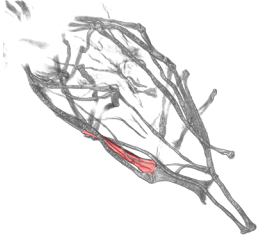
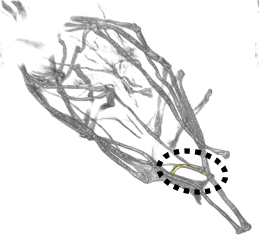
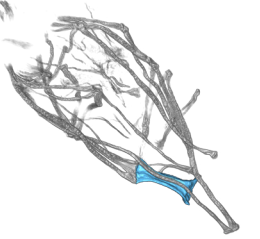
					
Ref. [10] 7a	9b	9a	7b, 9a	10, 11a	i
Ref. [11] i2	l2	l3	k1/2, l1	n1, o1	t2
Ref. [15] i2	l*1	l*2	k1, l1	n1, o1	t2
Ref. [14] 7-LII5	8-LII4	8-LII3	8-LII2, 9b-LII6	10-LIIa, 11-LIIa	i-LIIa + LIIa-LIIb
This study iiM2	iiM3	iiM4	iiM5	iiM6	iiM7
					
Ref. [10] e	B	C	D	?	?
Ref. [11] $\tau$ 2	2iii	3i	4i	?	?
Ref. [15] $\tau$ 2	2iii	3i	4i	?	sh
Ref. [14] e-LIIb	B-?	C-LII d	D-LII b	?-LII e	LII b (proximal point)
This study iiM8	iiM9	iiM11	iiM12	iiM13	iiM14

Table 1 (continued). Leg III.

						
Ref. [10]	11a, 11b	13b	13a	11b, 13a	$\Lambda, \eta, g_i$	f
Ref. [11]	o2, P?	q2	q3	P?, q1	s1, u1, t3	$\tau_3$
Ref. [15]	o2, p2	q*1	q*2	q1	s1, u1, t3b	$\tau_3$
Ref. [14]	11-LIII2	13-LIII5	13-LIII3	12-LIII1, 13-LIII1	$\Lambda, \eta, g_i$ -LIIa	f-LIIIb
This study	iiiM2	iiiM3	iiiM4	iiiM5	iiiM6	iiiM8
						
Ref. [10]	D	E	F	?	?	?
Ref. [11]	4iii	5i	6i	?	?	?
Ref. [15]	4iii	5i	6i	?	sh	
Ref. [14]	D-?	E-LIII d	F-LIII b	?-LIII e	LIII b (proximal point)	
This study	iiiM9	iiiM11	iiiM12	iiiM13	iiiM14	

**Table 1 (continued).** Leg IV.

							
Ref. [10]	$\chi-\eta$	$\phi-g_2$	$P_2-Q, \mu, \theta$	?	O-f	$\phi-F$	drawn, not labelled
Ref. [11]	u2	?	w'1, w1, v1	?	8a?	?	7iii
Ref. [15]	?	?	w1	?	8a	?	7iii
Ref. [14]	?	?-g <sub>2</sub>	$P_2-\theta, \chi$	$\chi-O$	O-f	$\chi-G$	$P_2-N$
This study	ivM2	ivM4	ivM5	ivM6	ivM8	ivM9	ivM11
							
Ref. [10]	?	P.-an	P.-O				
Ref. [11]	?	?	g				
Ref. [15]	?	?	sh				
Ref. [14]	O-N	?-P1	P1-O				
This study	ivM12	ivM13	ivM14				