

TABLE S2 | Molecular data and taxonomic identification of Trichomycterinae species used in this study.

Valid species	Basin	Data source	Identification source	Genbank code	Voucher institution	Voucher number	Voucher specimen/tissue
<i>Cambeva perobana</i>	Piquiri River	This study	This study	OQ756220	NUP	24166	N.A.
<i>Cambeva perobana</i>	Piquiri River	This study	This study	OQ756221	NUP	24167	N.A.
<i>Cambeva perobana</i>	Piquiri River	This study	This study	PP281332	NUP	25070	N.A.
<i>Cambeva balios</i>	Mampituba River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995676	UFRGS	16284	2738A
<i>Cambeva balios</i>	Mampituba River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995677	UFRGS	16284	2738B
<i>Cambeva balios</i>	Mampituba River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995678	UFRGS	17198	3203
<i>Cambeva balios</i>	Upper Uruguay River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995680	UFRGS	21886	6861B
<i>Cambeva balios</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995681	UFRGS	6844	521
<i>Cambeva balios</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995682	UFRGS	6842	533
<i>Cambeva balios</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995683	UFRGS	16435	2820B
<i>Cambeva balios</i>	Itajaí Açu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995684	UFRGS	23182	7446L
<i>Cambeva balios</i>	Itajaí Açu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995686	UFRGS	23182	7446A
<i>Cambeva balios</i>	Itajaí Açu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995687	UFRGS	23182	7446C
<i>Cambeva balios</i>	Itajaí Açu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995689	UFRGS	23182	7446P
<i>Cambeva balios</i>	Itajaí River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995692	UFRGS	22939	7365E
<i>Cambeva balios</i>	Laguna dos patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MT002665	UFRGS	16435	2820A
<i>Cambeva barbosae</i>	Tijucas River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995709	UFRGS	23235	7458
<i>Cambeva barbosae</i>	Biguaçu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995710	UFRGS	22907	7345A
<i>Cambeva barbosae</i>	Biguaçu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995713	UFRGS	22932	7360B
<i>Cambeva barbosae</i>	Cubatão Sul River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995714	UFRGS	22906	7344A
<i>Cambeva barbosae</i>	Cubatão Sul River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995715	UFRGS	22906	7344B
<i>Cambeva barbosae</i>	Ilha de Florianópolis	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995716	UFRGS	23183	7447A
<i>Cambeva barbosae</i>	Itapocu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995717	MCP	50477	N.A.
<i>Cambeva barbosae</i>	Cubatão Norte River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995719	MCP	50476	N.A.
<i>Cambeva brachykechenos</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995669	UFRGS	24666	8229
<i>Cambeva cauim</i>	Iguaçu River	Morais-Silva <i>et al.</i> (2018)	This study	KY231982	NUP	15709	B
<i>Cambeva chrysornata</i>	Cubatão Norte River	Donin <i>et al.</i> (2020)	This study	MN995724	UFRGS	24543	8117A
<i>Cambeva chrysornata</i>	Cubatão Norte River	Donin <i>et al.</i> (2020)	This study	MN995725	UFRGS	24311	7996A
<i>Cambeva chrysornata</i>	Babitonga River	Donin <i>et al.</i> (2020)	Costa <i>et al.</i> (2023)	MN995726	UFRGS	24552	8126A
<i>Cambeva chrysornata</i>	Babitonga River	Donin <i>et al.</i> (2020)	This study	MN995727	UFRGS	24552	8126B
<i>Cambeva cubataonis</i>	Paranagua bay	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995723	MNRJ	32940	4644
<i>Cambeva davisi</i>	Iguaçu River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY231979	NUP	15547	K
<i>Cambeva diabola</i>	Parapanema River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	JN989258	LBP	3507	21298
<i>Cambeva diabola</i>	Parapanema River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	JN989259	LBP	3507	21295
<i>Cambeva diabola</i>	Parapanema River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	JN989257	LBP	3507	21297
<i>Cambeva diabola</i>	Parapanema River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	JN989256	LBP	N.A.	19861
<i>Cambeva diabola</i>	Parapanema River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	JN989255	LBP	3306	19860



TABLE S2 | (Continued)

Valid species	Basin	Data source	Identification source	Genbank code	Voucher institution	Voucher number	Voucher specimen/tissue
<i>Cambeva diatropoporos</i>	Laguna dos patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995654	UFRGS	17887	3560
<i>Cambeva diatropoporos</i>	Laguna dos patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995655	UFRGS	17889	3562
<i>Cambeva flavopicta</i>	Uruguay River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2022)	MN995697	UFRGS	14998	1780A
<i>Cambeva flavopicta</i>	Uruguay River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2022)	MN995698	UFRGS	14998	1780B
<i>Cambeva grisea</i>	Araranguá River	Donin <i>et al.</i> (2020)	Costa <i>et al.</i> (2023)	MN995671	UFRGS	22962	7378A
<i>Cambeva guaraquessaba</i>	Paranaguá bay tributaries	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995661	UFRGS	24541	8115
<i>Cambeva guaraquessaba</i>	Paranaguá bay tributaries	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995662	UFRGS	24554	8128A
<i>Cambeva guaratuba</i>	Guaratuba River	Donin <i>et al.</i> (2020)	Costa <i>et al.</i> (2023)	MN995721	UFRGS	24556	8130A
<i>Cambeva guaratuba</i>	Guaratuba River	Donin <i>et al.</i> (2020)	This study	MN995722	UFRGS	24556	8130B
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232022	NUP	15591	C
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232023	NUP	15591	D
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232024	NUP	15610	B
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232026	NUP	15668	C
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232027	NUP	15669	C
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232028	NUP	15692	C
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232029	NUP	15696	C
<i>Cambeva horacioi</i>	Ivaí River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY232030	NUP	15747	C
<i>Cambeva iheringi</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	GU701474	LBP	3685	21802
<i>Cambeva iheringi</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	GU701476	LBP	3671	21761
<i>Cambeva iheringi</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	GU701477	LBP	3685	21803
<i>Cambeva iheringi</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	GU701892	LBP	3671	21759
<i>Cambeva iheringi</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	GU701893	LBP	3671	21760
<i>Cambeva imaruhy</i>	Tubarão River	Donin <i>et al.</i> (2020)	Costa <i>et al.</i> (2023)	MN995700	UFRGS	23184	
<i>Cambeva naipi</i>	Iguaçu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995699	UFRGS	11405	6739
<i>Cambeva orbitofrontalis</i>	Ararangua River	Donin <i>et al.</i> (2020)	Costa <i>et al.</i> (2023)	MN995703	UFRGS	22964	7380A
<i>Cambeva paolence</i>	Tietê River	Pereira <i>et al.</i> (2013)	Pereira <i>et al.</i> (2013)	HM376398	LBP	7684	36308
<i>Cambeva pascuali</i>	Paranapanema River	Ochoa <i>et al.</i> (2017)	Ochoa <i>et al.</i> (2017)	MF034463	LBP	N.A.	N.A.
<i>Cambeva perkos</i>	Uruguai River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995663	UFRGS	17923	3596
<i>Cambeva poikilos</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995693	UFRGS	24604	8177A
<i>Cambeva poikilos</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995694	UFRGS	20352	5622A
<i>Cambeva poikilos</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995695	UFRGS	15014	1795
<i>Cambeva poikilos</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995696	UFRGS	17419	3314
<i>Cambeva stawiarski</i>	Iguaçu River	Morais-Silva <i>et al.</i> (2018)	Morais-Silva <i>et al.</i> (2018)	KY231990	NUP	18805	D
<i>Cambeva stawiarski</i>	Iguaçu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995720	UFRGS	18307	3793A
<i>Cambeva taroba</i>	Iguaçu River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995708	UFRGS	18308	3794A
<i>Cambeva tropeiro</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995674	UFRGS	21878	6855A
<i>Cambeva tropeiro</i>	Laguna dos Patos	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995675	UFRGS	21878	6855B



TABLE S2 | (Continued)

Valid species	Basin	Data source	Identification source	Genbank code	Voucher institution	Voucher number	Voucher specimen/tissue
<i>Cambeva tupinamba</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995656	UFRGS	24550	8124A
<i>Cambeva tupinamba</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995657	UFRGS	24550	8124B
<i>Cambeva tupinamba</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995658	UFRGS	24563	8137B
<i>Cambeva tupinamba</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995659	UFRGS	24563	8137A
<i>Cambeva zonata</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995705	UFRGS	24538	8112B
<i>Cambeva zonata</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995706	UFRGS	24538	8112A
<i>Cambeva zonata</i>	Ribeira de Iguape River	Donin <i>et al.</i> (2020)	Donin <i>et al.</i> (2020)	MN995707	UFRGS	18675	3998
<i>Trichomycterus nigricans</i>	N.A.	Costa <i>et al.</i> (2020)	Costa <i>et al.</i> (2020)	MN385796	UFRJ	10989	N.A.

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