TABLE S1 | Haplotype number followed by the number of specimens and vouchers of each haplotype.

Hap 1: 1 [*Cambeva marginimaculata*, NUP 24849B]
Hap 2: 5 [*Cambeva marliae*, NUP 25734B, NUP 25734A, NUP 25734C, NUP 25737A, NUP 25737B]
Hap 3: 5 [*Cambeva* aff. *perkos*, NUP 21092B, NUP 21092A, NUP 21090, NUP 21090A, NUP 21090B, NUP 21090C]
Hap 4: 7 [*Cambeva* aff. *perkos*, NUP 21064A, NUP 21023B, NUP 21023A NUP 20299C, *Cambeva* aff. *perkos* NUP 21064B, NUP 21018]
Hap 5: 2 [*Cambeva* aff. *perkos*, NUP 20307A, NUP 20307B]
Hap 6: 1 [*Cambeva perobana*, NUP 24166]
Hap 7: 3 [*Cambeva perobana*, NUP 24167, NUP 25070, NUP 15756B]
Hap 8: 2 [*Cambeva iheringi*, LBP 21802, LBP 21803]
Hap 9: 3 [*Cambeva iheringi*, LBP 21761, LBP 21759, LBP 21760]
Hap 10: 1 [*Cambeva davisi*, MZUEL 11805]
Hap 11: 3 [*Cambeva davisi*, W90A, W91B, W91C]
Hap 12: 3 [*Cambeva davisi*, NUP15631A, NUP15631C, NUP 15686A]
Hap 13: 1 [*Cambeva davisi*, W46A]
Hap 14: 10 [*Cambeva davisi*, NUP 15547C, NUP 15547D, NUP 15547H, *Cambeva diabola*, LBP 21295, LBP 21298, LBP 21297, LBP 19861, *Cambeva* aff. *davisi* UFRGS 23183, MCP 50477, MCP 50476]
Hap 15: 1 [*Cambeva davisi*, NUP 15547J]
Hap 16: 1 [*Cambeva davisi* NUP15547K]
Hap 17: 1 [*Cambeva davisi*, NUP15628C]
Hap 18: 1 [*Cambeva caium*, NUP15709B]
Hap 19: 1 [*Cambeva davisi*, NUP15718C]
Hap 20: 1 [*Cambeva davisi*, NUP15721B]
Hap 21: 1 [*Cambeva stawiarski*, W51D]
Hap 22: 1 [*Cambeva stawiarski*, NUP15434A]
Hap 23: 1 [*Cambeva perobana*, NUP15621B]
Hap 24: 2 [*Cambeva perobana*, NUP15635A, NUP15726C]
Hap 25: 2 [*Cambeva perobana*, NUP15645A, NUP15760B]
Hap 26: 1 [*Cambeva perobana*, NUP 15726A]
Hap 27: 1 [*Cambeva perobana*, NUP15744A]
Hap 28: 8 [*Cambeva davisi*, W58B, W58C, W60A, W62A, W63D, W71E, NUP 15382C, NUP 15660E]
Hap 29: 3 [*Cambeva* aff. *perkos*, W73A, MZUEL 17202A, MZUEL 17202B]
Hap 30: 1 [*Cambeva davisi*, W76A]
Hap 31: 1 [*Cambeva galactica*, UFRJ 13517]
Hap 32: 1 [*Cambeva rotundipinna*, UFRJ 13560]
Hap 33: 1 [*Cambeva atrobrunnea*, UFRJ 13554]
Hap 34: 1 [*Cambeva pascuali*, LBP 23323]
Hap 35: 1 [*Cambeva diabola*, LBP 19860]
Hap 36: 1 [*Cambeva davisi*, NUP 15384A]
Hap 37: 1 [*Cambeva davisi*, NUP15564A]
Hap 38: 1 [*Cambeva stawiarski*, NUP15428A]
Hap 39: 3 [*Cambeva horacioi*, NUP 15591C, NUP 15591D, NUP 15668A]
Hap 40: 1 [*Cambeva horacioi*, NUP 15610B]
Hap 41: 1 [*Cambeva stawiarski*, NUP 15661B]
Hap 42: 1 [*Cambeva horacioi*, NUP 15669A]
Hap 43: 1 [*Cambeva horacioi*, NUP 15692A]
Hap 44: 1 [*Cambeva horacioi*, NUP 15696A]
Hap 45: 1 [*Cambeva horacioi*, NUP 15747A]
Hap 46: 3 [*Cambeva zonata*, W70B, W102B, W102C]
Hap 47: 2 [*Cambeva zonata*, W95B, W98B]
Hap 48: 2 [*Cambeva zonata*, W96B, W96C]
Hap 49: 1 [*Cambeva zonata*, W98A]
Hap 50: 2 [*Cambeva* cf. *zonata*, KY232040, KY232041]
Hap 51: 1 [*Cambeva diatropoporos*, UFRGS 17887]

TABLE S1 | (Continued)

Hap 52: 1 [*Cambeva diatropoporos*, UFRGS 17889]
Hap 53: 2 [*Cambeva tupinamba*, UFRGS 24550, UFRGS 24550]
Hap 54: 1 [*Cambeva tupinamba*, UFRGS 24563]
Hap 55: 1 [*Cambeva tupinamba*, UFRGS 24563]
Hap 56: 2 [*Cambeva guaraquessaba*, UFRGS 24541, UFRGS 24554]
Hap 57: 1 [*Cambeva perkos*, UFRGS 17923]
Hap 58: 1 [*Cambeva brachykechenos*, UFRGS 24666]
Hap 59: 1 [*Cambeva grisea*, UFRGS 22962]
Hap 60: 2 [*Cambeva tropeiro*, UFRGS 21878, UFRGS 21878]
Hap 61: 3 [*Cambeva balios*, UFRGS 16284, UFRGS 16284, UFRGS 17198]
Hap 62: 2 [*Cambeva balios*, UFRGS 21886, UFRGS 21886]
Hap 63: 4 [*Cambeva balios*, UFRGS 6844, UFRGS 6842, UFRGS 16435, UFRGS 16435]
Hap 64: 4 [*Cambeva balios*, UFRGS 23182, UFRGS 23182, UFRGS 23182, UFRGS 23182]
Hap 65: 1 [*Cambeva balios*, UFRGS 22939]
Hap 66: 1 [*Cambeva balios*, UFRGS 23182]
Hap 67: 2 [*Cambeva balios*, UFRGS 23182, UFRGS 22939]
Hap 68: 1 [*Cambeva poikilos*, UFRGS 24604]
Hap 69: 1 [*Cambeva poikilos*, UFRGS 20352]
Hap 70: 1 [*Cambeva poikilos*, UFRGS 15014]
Hap 71: 1 [*Cambeva poikilos*, UFRGS 17419]
Hap 72: 1 [*Cambeva flavopicta*, UFRGS 14998]
Hap 73: 2 [*Cambeva flavopicta*, UFRGS 14998, UFRJ 13306]
Hap 74: 1 [*Cambeva orbitofrontalis*, UFRGS 23184]
Hap 75: 1 [*Cambeva zonata*, UFRGS 24538]
Hap 76: 2 [*Cambeva zonata*, UFRGS 24538, UFRGS 18675]
Hap 77: 1 [*Cambeva taroba*, UFRGS 18308]
Hap 78: 1 [Cambeva aff. *davisi*, UFRGS 23235]
Hap 79: 5 [Cambeva aff. *davisi*, UFRGS 22932, UFRGS 22907, UFRGS 22932, UFRGS 22906, UFRGS 22906]
Hap 80: 1 [*Cambeva stawiarski*, UFRGS 18307]
Hap 81: 1 [*Cambeva cubataonis*, UFRGS 24556]
Hap 82: 1 [*Cambeva cubataonis*, UFRGS 24556]
Hap 83: 1 [*Cambeva cubataonis*, MNRJ 32940]
Hap 84: 4 [*Cambeva cubataonis*, UFRGS 24543, UFRGS 24311, UFRGS 24552, UFRGS 24552]
Hap 85: 2 [*Cambeva* aff. *perkos*, MZUEL 17213A, 17213B]
Hap 86: 1 [*Cambeva naipi*, UFRGS 11405]
Hap 87: 1 [*Cambeva panthera*, UFRJ 13304]
Hap 88: 1 [*Cambeva podostemophila*, UFRJ 13325]
Hap 89: 1 [*Cambeva melanoptera*, UFRJ 13672]
Hap 90: 1 [*Cambeva dificillis*, UFRJ 13963]
Hap 91: 1 [*Tichomycterus nigricans*, UFRJ 10989]

TABLE S2 | Molecular data and taxonomic identification of Trichomycterinae species used in this study. N.A. = Not available.

Valid species	Basin	Data source	Identification source	Genbank code	Voucher Institution	Voucher specimen/ tissue
Cambeva balios	Mampituba River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995676	UFRGS 16284	2738A
Cambeva balios	Mampituba River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995677	UFRGS 16284	2738B
Cambeva balios	Mampituba River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995678	UFRGS 17198	3203
Cambeva balios	Upper Uruguay River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995680	UFRGS 21886	6861B
Cambeva balios	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995681	UFRGS 6844	521
Cambeva balios	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995682	UFRGS 6842	533
Cambeva balios	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995683	UFRGS 16435	2820B
Cambeva balios	Itajaí Açu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995684	UFRGS 23182	7446L
Cambeva balios	Itajaí Açu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995686	UFRGS 23182	7446A
Cambeva balios	Itajaí Açu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995687	UFRGS 23182	7446C
Cambeva balios	Itajaí Açu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995689	UFRGS 23182	7446P
Cambeva balios	Itajaí River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995692	UFRGS 22939	7365E
Cambeva balios	Laguna dos patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MT002665	UFRGS 16435	2820A
Cambeva barbosae	Tijucas River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995709	UFRGS 23235	7458
Cambeva barbosae	Biguaçu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995710	UFRGS 22907	7345A
Cambeva barbosae	Biguaçu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995713	UFRGS 22932	7360B
Cambeva barbosae	Cubatão Sul River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995714	UFRGS 22906	7344A
Cambeva barbosae	Cubatão Sul River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995715	UFRGS 22906	7344B
Cambeva barbosae	Ilha de Florianópolis	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995716	UFRGS 23183	7447A
Cambeva barbosae	Itapocu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995717	MCP 50477	N.A.
Cambeva barbosae	Cubatão Norte River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995719	MCP 50476	N.A.
Cambeva brachykechenos	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995669	UFRGS 24666	8229
Cambeva cauim	Iguaçu River	Morais-Silva *et al.* (2018)	This study	KY231982	NUP 15709	B
Cambeva chrysornata	Cubatão Norte River	Donin *et al.* (2020)	This study	MN995724	UFRGS 24543	8117A
Cambeva chrysornata	Cubatão Norte River	Donin *et al.* (2020)	This study	MN995725	UFRGS 24311	7996A
Cambeva chrysornata	Babitonga River	Donin *et al.* (2020)	Costa et al. 2023	MN995726	UFRGS 24552	8126A
Cambeva chrysornata	Babitonga River	Donin *et al.* (2020)	This study	MN995727	UFRGS 24552	8126B
Cambeva cubataonis	Paranagua bay	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995723	MNRJ 32940	4644
Cambeva davisi	Iguaçu River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY231979	NUP 15547	K
Cambeva diabola	Paranapanema River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	JN989258	LBP 3507	21298
Cambeva diabola	Paranapanema River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	JN989259	LBP 3507	21295
Cambeva diabola	Paranapanema River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	JN989257	LBP 3507	21297
Cambeva diabola	Paranapanema River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	JN989256	LBP N.A.	19861
Cambeva diabola	Paranapanema River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	JN989255	LBP 3306	19860
Cambeva diatropoporos	Laguna dos patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995654	UFRGS 17887	3560
Cambeva diatropoporos	Laguna dos patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995655	UFRGS 17889	3562
Cambeva flavopicta	Uruguay River	Donin *et al.* (2020)	Donin *et al.* (2022)	MN995697	UFRGS 14998	1780A
Cambeva flavopicta	Uruguay River	Donin *et al.* (2020)	Donin *et al.* (2022)	MN995698	UFRGS 14998	1780B
Cambeva grisea	Araranguá River	Donin *et al.* (2020)	Costa *et al.* (2023)	MN995671	UFRGS 22962	7378A

TABLE S2 | (Continued)

Valid species	Basin	Data source	Identification source	Genbank code	Voucher Institution	Voucher specimen/ tissue
Cambeva guaraquessaba	Paranaguá bay tributaries	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995661	UFRGS 24541	8115
Cambeva guaraquessaba	Paranaguá bay tributaries	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995662	UFRGS 24554	8128A
Cambeva guaratuba	Guaratuba River	Donin *et al.* (2020)	Costa *et al.* (2023)	MN995721	UFRGS 24556	8130A
Cambeva guaratuba	Guaratuba River	Donin *et al.* (2020)	This study	MN995722	UFRGS 24556	8130B
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232022	NUP 15591	C
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232023	NUP 15591	D
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232024	NUP 15610	B
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232026	NUP 15668	C
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232027	NUP 15669	C
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232028	NUP 15692	C
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232029	NUP 15696	C
Cambeva horacioi	Ivaí River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY232030	NUP 15747	C
Cambeva iheringi	Tietê River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	GU701474	LBP 3685	21802
Cambeva iheringi	Tietê River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	GU701476	LBP 3671	21761
Cambeva iheringi	Tietê River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	GU701477	LBP 3685	21803
Cambeva iheringi	Tietê River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	GU701892	LBP 3671	21759
Cambeva iheringi	Tietê River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	GU701893	LBP 3671	21760
Cambeva imaruhy	Tubarão River	Donin *et al.* (2020)	Costa *et al.* (2023)	MN995700	UFRGS 23184	
Cambeva marginimaculata	Piquiri River	This study	This study	PV915783	NUP 24849	N.A.
Cambeva marliae	São Francisco Falso River	This study	This study	PV560700	NUP 25734	25734A
Cambeva marliae	São Francisco Falso River	This study	This study	PV560701	NUP 25070	25734C
Cambeva marliae	São Francisco Verdadeiro River	This study	This study	PV560705	NUP 25737	25737A
Cambeva marliae	São Francisco Verdadeiro River	This study	This study	PV560706	NUP 25737	25737B
Cambeva naipi	Iguaçu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995699	UFRGS 11405	6739
Cambeva orbitofrontalis	Ararangua River	Donin *et al.* (2020)	Costa *et al.* (2023)	MN995703	UFRGS 22964	7380A
Cambeva paolence	Tiête River	Pereira *et al.* (2013)	Pereira *et al.* (2013)	HM376398	LBP 7684	36308
Cambeva pascuali	Paranapanema River	Ochoa *et al.* (2017)	Ochoa *et al.* (2017)	MF034463	LBP N.A.	N.A.
Cambeva perkos	Uruguai River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995663	UFRGS 17923	3596
Cambeva poikilos	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995693	UFRGS 24604	8177A
Cambeva poikilos	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995694	UFRGS 20352	5622A
Cambeva poikilos	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995695	UFRGS 15014	1795
Cambeva poikilos	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995696	UFRGS 17419	3314
Cambeva stawiarski	Iguaçu River	Morais-Silva *et al.* (2018)	Morais-Silva *et al.* (2018)	KY231990	NUP 18805	D
Cambeva stawiarski	Iguaçu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995720	UFRGS 18307	3793A
Cambeva taroba	Iguaçu River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995708	UFRGS 18308	3794A

TABLE S2 | (Continued)

Valid species	Basin	Data source	Identification source	Genbank code	Voucher Institution	Voucher specimen/ tissue
Cambeva tropeiro	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995674	UFRGS 21878	6855A
Cambeva tropeiro	Laguna dos Patos	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995675	UFRGS 21878	6855B
Cambeva tupinamba	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995656	UFRGS 24550	8124A
Cambeva tupinamba	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995657	UFRGS 24550	8124B
Cambeva tupinamba	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995658	UFRGS 24563	8137B
Cambeva tupinamba	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995659	UFRGS 24563	8137A
Cambeva zonata	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995705	UFRGS 24538	8112B
Cambeva zonata	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995706	UFRGS 24538	8112A
Cambeva zonata	Ribeira de Iguape River	Donin *et al.* (2020)	Donin *et al.* (2020)	MN995707	UFRGS 18675	3998
Trichomycterus nigricans	N.A.	Costa *et al.* (2020)	Costa *et al.* (2020)	MN385796	UFRJ 10989	N.A.

REFERENCES

- **Costa WJEM, Feltrin CRM, Mattos JLO, Dalcin RH, Abilhoa V, Katz AM.** Morpho-molecular discordance? Re-approaching systematics of *Cambeva* (Siluriformes: Trichomycteridae) from the Guaratuba-Babitonga-Itapocu area, Southern Brazil. Fishes. 2023; 8(2):63. https://doi.org/10.3390/fishes8020063
- **Costa WJEM, Henschel E, Katz AM.** Multigene phylogeny reveals convergent evolution in small interstitial catfishes from the Amazon and Atlantic forests (Siluriformes: Trichomycteridae). Zool Scr. 2020; 49(2):159–73. https://doi.org/10.1111/zsc.12403
- **Donin LM, Ferrer J, Carvalho TP.** Uncertainties and risks in delimiting species of *Cambeva* (Siluriformes: Trichomycteridae) with single-locus methods and geographically restricted data. Neotrop Ichthyol. 2022; 20(3):e220019. https://doi.org/10.1590/1982-0224-2022-0019
- **Donin LM, Ferrer J, Carvalho TP.** Taxonomical study of *Trichomycterus* (Siluriformes: Trichomycteridae) from the Ribeira de Iguape River reveals a new species recorded in the early 20th century. J Fish Biol. 2020; 96(4):886–904. https://doi.org/10.1111/jfb.14278
- **Morais-Silva JP, Oliveira AV, Fabrin TM, Diamante NA, Prioli SMAP, Frota A *et al*.** Geomorphology influencing the diversification of fish in small-order rivers of neighborings. Zebrafish. 2018; 15(4):zeb.2017.1551. https://doi.org/10.1089/zeb.2017.1551
- **Pereira LHG, Hanner R, Foresti F, Oliveira C.** Can DNA barcoding accurately discriminate megadiverse Neotropical freshwater fish fauna? BMC Genetics. 2013; 14:20. https://doi.org/10.1186/1471-2156-14-20

TABLE S3 | Interspecific and intraspecific Kimura-2-Parameter distances for species of *Cambeva* using COI gene. n/c indicates cases in which it was not possible to estimate evolutionary distances.

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 *Cambeva marginimaculata*	**n/c**																		
2 *Cambeva marliae*	0.020	**0**																	
3 *Cambeva perobana*	0.028	0.020	**0.006**																
4 *Cambeva horacioi*	0.049	0.056	0.048	**0.009**															
5 *Cambeva pascuali*	0.038	0.047	0.042	0.037	**0.003**														
6 Cambeva diabola	0.029	0.029	0.02	0.045	0.041	**n/c**													
7 *Cambeva* aff. *davisi*	0.030	0.030	0.021	0.046	0.042	0.002	**0.001**												
8 *Cambeva* aff. *perkos*	0.041	0.037	0.027	0.059	0.051	0.033	0.034	**0.028**											
9 *Cambeva igobi*	0.024	0.020	0.016	0.045	0.036	0.018	0.019	0.028	**n/c**										
10 *Cambeva iheringi*	0.078	0.079	0.071	0.064	0.067	0.074	0.075	0.08	0.074	**0.013**									
11 *Cambeva davisi*	0.039	0.036	0.028	0.051	0.045	0.027	0.028	0.024	0.026	0.077	**n/c**								
12 *Cambeva caiuim*	0.030	0.026	0.024	0.055	0.047	0.024	0.026	0.03	0.018	0.076	0.031	**n/c**							
13 *Cambeva stawiarski*	0.027	0.020	0.011	0.048	0.041	0.021	0.022	0.025	0.013	0.074	0.027	0.022	**n/c**						
14 *Cambeva galactica*	0.040	0.041	0.037	0.043	0.038	0.037	0.038	0.04	0.03	0.071	0.036	0.04	0.034	**n/c**					
15 *Cambeva rotundipinna*	0.028	0.024	0.014	0.051	0.043	0.02	0.021	0.02	0.016	0.073	0.024	0.022	0.015	0.036	**0.001**				
16 *Cambeva atrobrunnea*	0.024	0.024	0.014	0.047	0.038	0.02	0.021	0.024	0.016	0.065	0.025	0.022	0.016	0.028	0.012	**0.015**			
17 *Cambeva zonata*	0.06	0.064	0.055	0.042	0.039	0.052	0.053	0.06	0.054	0.074	0.05	0.056	0.055	0.042	0.051	0.047	**n/c**		
18 *Cambeva diatroporos*	0.088	0.086	0.085	0.087	0.083	0.089	0.09	0.084	0.084	0.081	0.085	0.095	0.083	0.079	0.078	0.082	0.081	**0.016**	
19 *Cambeva tupinamba*	0.081	0.081	0.071	0.062	0.061	0.073	0.074	0.074	0.072	0.03	0.069	0.074	0.072	0.072	0.068	0.07	0.064	0.091	**0.005**
20 *Cambeva guaraquessaba*	0.079	0.08	0.069	0.061	0.06	0.071	0.072	0.072	0.071	0.031	0.068	0.073	0.071	0.073	0.066	0.07	0.065	0.092	0.005
21 *Cambeva* sp.	0.065	0.069	0.061	0.061	0.056	0.059	0.06	0.064	0.061	0.084	0.061	0.065	0.062	0.053	0.058	0.053	0.059	0.084	0.082
22 *Cambeva brachykechenos*	0.06	0.064	0.061	0.052	0.058	0.062	0.064	0.063	0.062	0.074	0.064	0.062	0.062	0.055	0.055	0.051	0.056	0.071	0.074
23 *Cambeva grisea*	0.075	0.08	0.072	0.068	0.064	0.073	0.075	0.074	0.073	0.085	0.072	0.078	0.073	0.062	0.066	0.062	0.062	0.073	0.086
24 *Cambeva tropeiro*	0.064	0.069	0.056	0.054	0.06	0.058	0.059	0.057	0.058	0.065	0.06	0.062	0.057	0.055	0.053	0.051	0.061	0.058	0.072
25 *Cambeva balios*	0.069	0.074	0.061	0.052	0.058	0.063	0.064	0.062	0.063	0.064	0.064	0.067	0.062	0.061	0.058	0.055	0.058	0.062	0.072
26 *Cambeva poikilos*	0.072	0.077	0.067	0.057	0.058	0.062	0.063	0.069	0.07	0.079	0.066	0.077	0.068	0.059	0.066	0.063	0.058	0.069	0.076
27 *Cambeva flavopicta*	0.052	0.056	0.053	0.043	0.034	0.044	0.045	0.06	0.05	0.073	0.053	0.056	0.052	0.043	0.052	0.043	0.046	0.094	0.074
28 *Cambeva orbitofrontalis*	0.053	0.058	0.045	0.056	0.053	0.041	0.042	0.042	0.047	0.074	0.044	0.047	0.046	0.041	0.041	0.036	0.056	0.084	0.075
29 *Cambeva taroba*	0.049	0.056	0.044	0.018	0.041	0.043	0.044	0.051	0.045	0.063	0.047	0.055	0.046	0.036	0.047	0.038	0.041	0.08	0.063
30 *Cambeva cubataonis*	0.034	0.03	0.021	0.048	0.041	0.026	0.027	0.024	0.019	0.063	0.028	0.026	0.021	0.03	0.016	0.016	0.05	0.075	0.063
31 *Cambeva naipi*	0.054	0.058	0.049	0.043	0.044	0.047	0.049	0.05	0.049	0.062	0.05	0.053	0.049	0.045	0.046	0.045	0.051	0.077	0.057
32 *Cambeva panthera*	0.051	0.056	0.051	0.057	0.055	0.043	0.044	0.049	0.049	0.078	0.048	0.049	0.05	0.043	0.047	0.043	0.058	0.082	0.079
33 *Cambeva podostemophila*	0.064	0.069	0.059	0.052	0.055	0.058	0.059	0.061	0.062	0.063	0.061	0.068	0.06	0.051	0.058	0.055	0.053	0.062	0.066
34 *Cambeva melanoptera*	0.03	0.026	0.018	0.048	0.043	0.016	0.017	0.026	0.014	0.074	0.026	0.008	0.017	0.036	0.018	0.018	0.05	0.091	0.072
35 *Cambeva dificillis*	0.100	0.104	0.096	0.083	0.090	0.096	0.097	0.101	0.097	0.025	0.097	0.099	0.098	0.090	0.093	0.088	0.087	0.098	0.048
Outgroup	0.112	0.113	0.096	0.114	0.115	0.101	0.102	0.102	0.106	0.110	0.100	0.105	0.100	0.103	0.098	0.098	0.112	0.129	0.121

TABLE S3 | (Continued)

Species	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Outgroup
20 *Cambeva guaraquessaba*	**0.000**																
21 *Cambeva* sp.	0.083	**0.050**															
22 *Cambeva brachykechenos*	0.075	0.042	**n/c**														
23 *Cambeva grisea*	0.086	0.044	0.018	**n/c**													
24 *Cambeva tropeiro*	0.071	0.054	0.041	0.043	**0.000**												
25 *Cambeva balios*	0.07	0.055	0.039	0.041	0.006	**0.005**											
26 *Cambeva poikilos*	0.075	0.054	0.035	0.04	0.037	0.038	**0.009**										
27 *Cambeva flavopicta*	0.075	0.059	0.061	0.069	0.064	0.062	0.064	**0.007**									
28 *Cambeva orbitofrontalis*	0.075	0.045	0.055	0.062	0.043	0.049	0.06	0.046	**n/c**								
29 *Cambeva taroba*	0.064	0.055	0.049	0.06	0.053	0.052	0.055	0.046	0.049	**n/c**							
30 *Cambeva cubataonis*	0.064	0.053	0.05	0.061	0.049	0.053	0.06	0.046	0.036	0.036	**0.001**						
31 *Cambeva naipi*	0.056	0.057	0.051	0.062	0.051	0.054	0.055	0.054	0.053	0.044	0.047	**0.006**					
32 *Cambeva panthera*	0.08	0.045	0.053	0.06	0.045	0.051	0.058	0.044	0.006	0.055	0.039	0.055	**0.005**				
33 *Cambeva podostemophila*	0.064	0.05	0.03	0.032	0.028	0.029	0.02	0.058	0.051	0.045	0.052	0.047	0.049	**n/c**			
34 *Cambeva melanoptera*	0.071	0.062	0.064	0.075	0.06	0.065	0.068	0.052	0.045	0.047	0.021	0.048	0.047	0.06	**n/c**		
35 *Cambeva dificillis*	0.049	0.099	0.09	0.097	0.086	0.085	0.094	0.096	0.093	0.079	0.081	0.086	0.097	0.082	0.095	**n/c**	
Outgroup	0.122	0.109	0.103	0.110	0.096	0.101	0.112	0.111	0.098	0.100	0.087	0.117	0.101	0.103	0.105	0.121	**n/c**

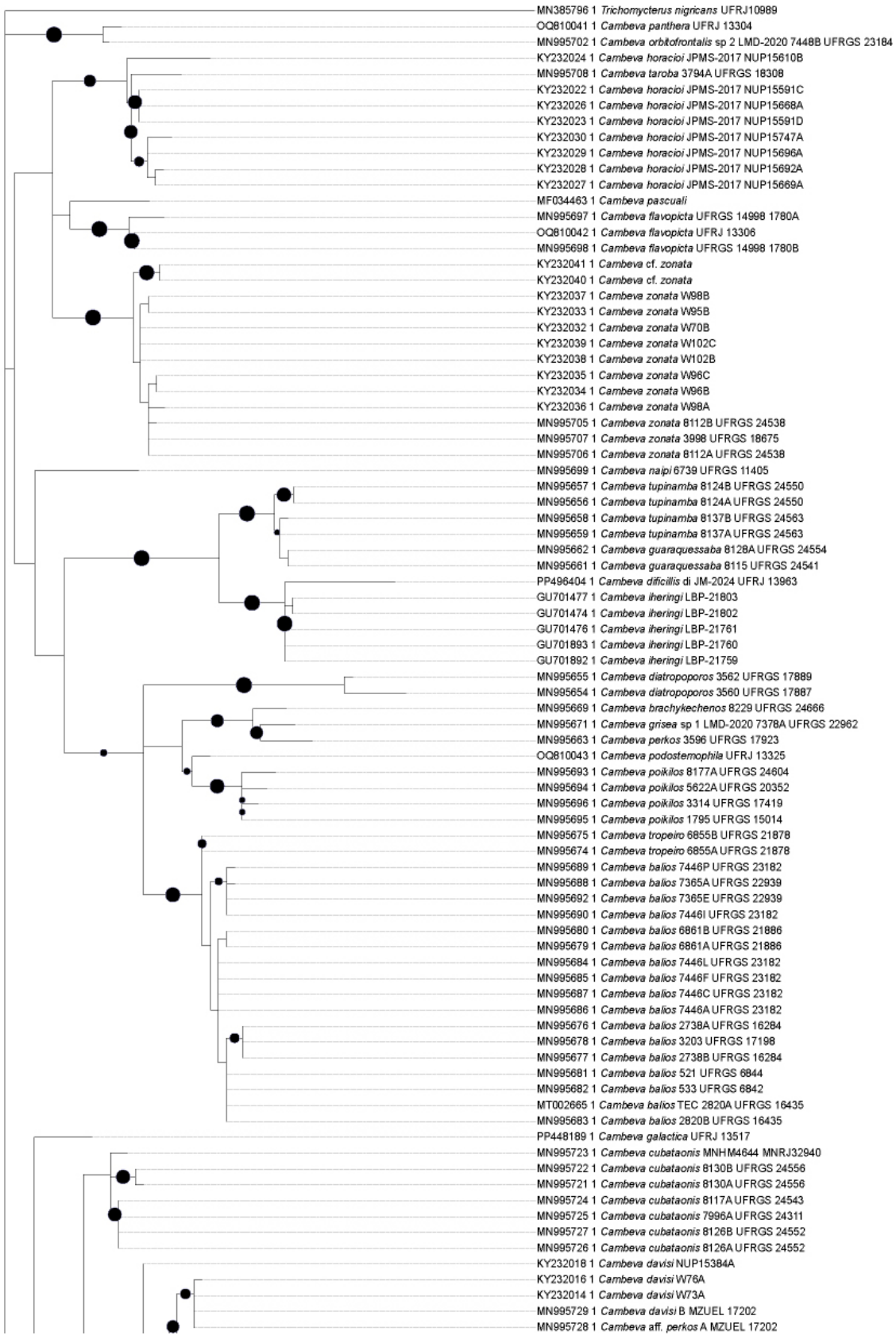

FIGURE S4 | Maximum-likelihood tree constructed from *Cambeva* COI gene sequences.

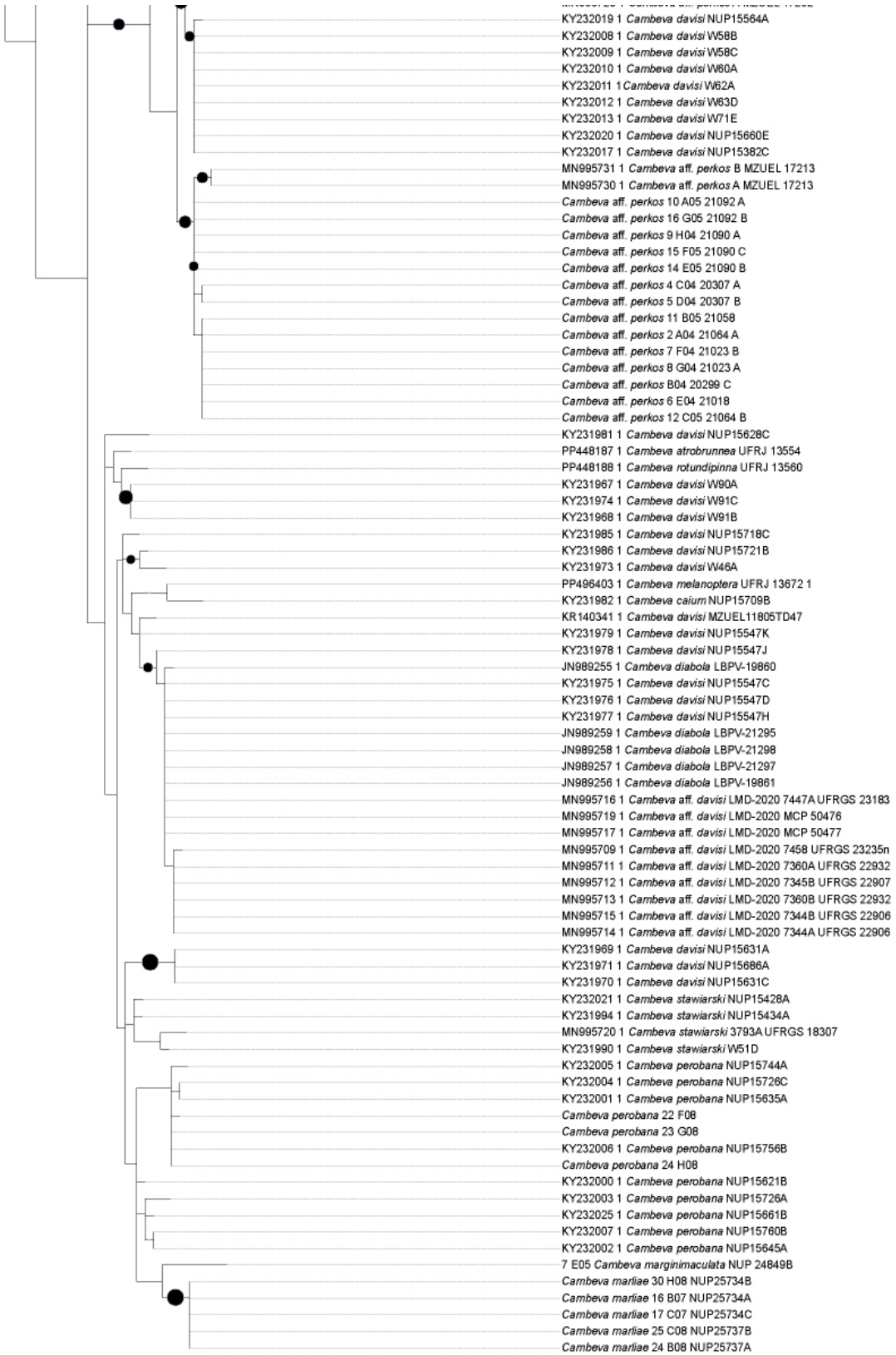

FIGURE S4 | (Continued)

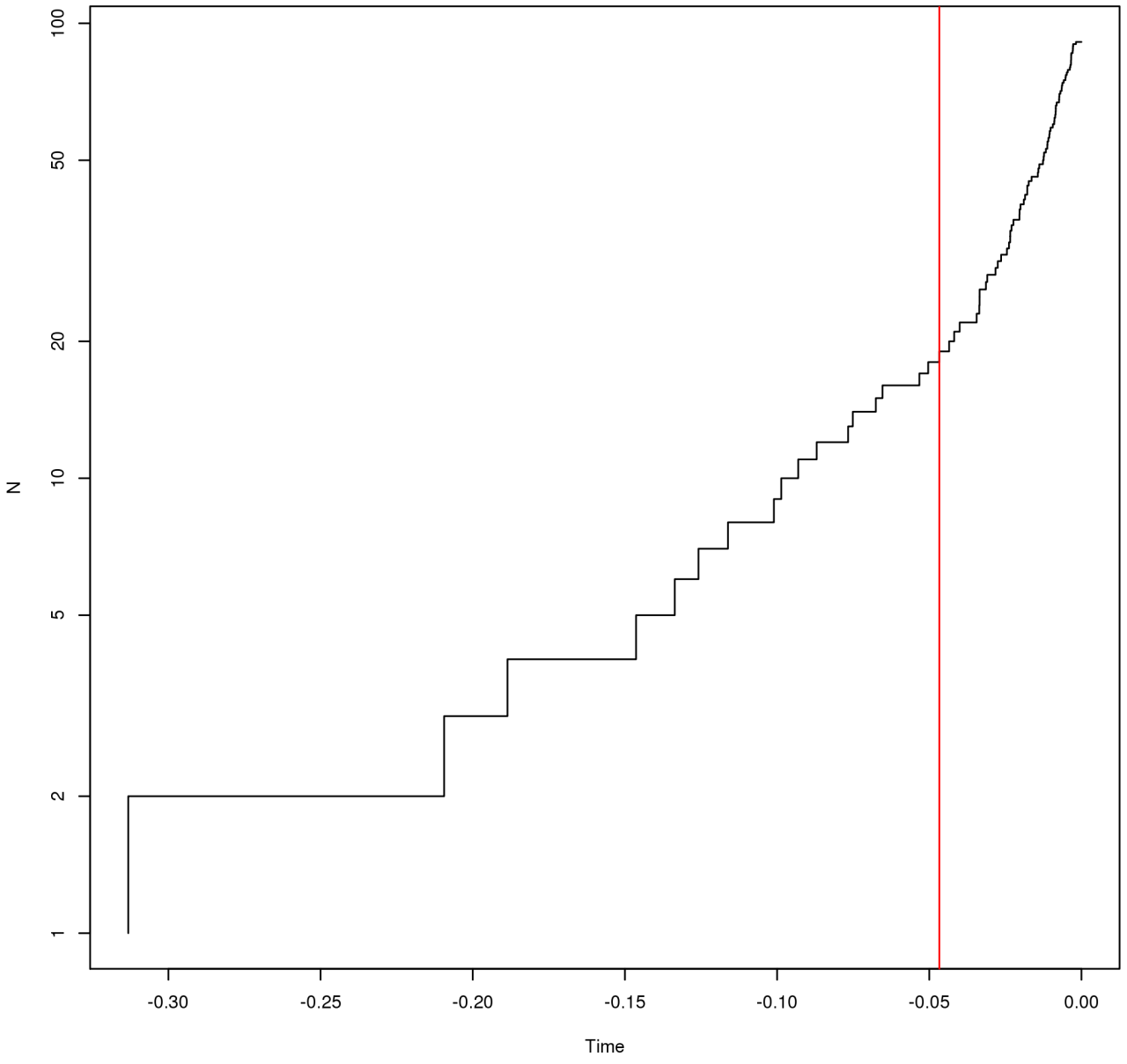

FIGURE S5 | Full results of the single-threshold (sGMYC) delimitation method.

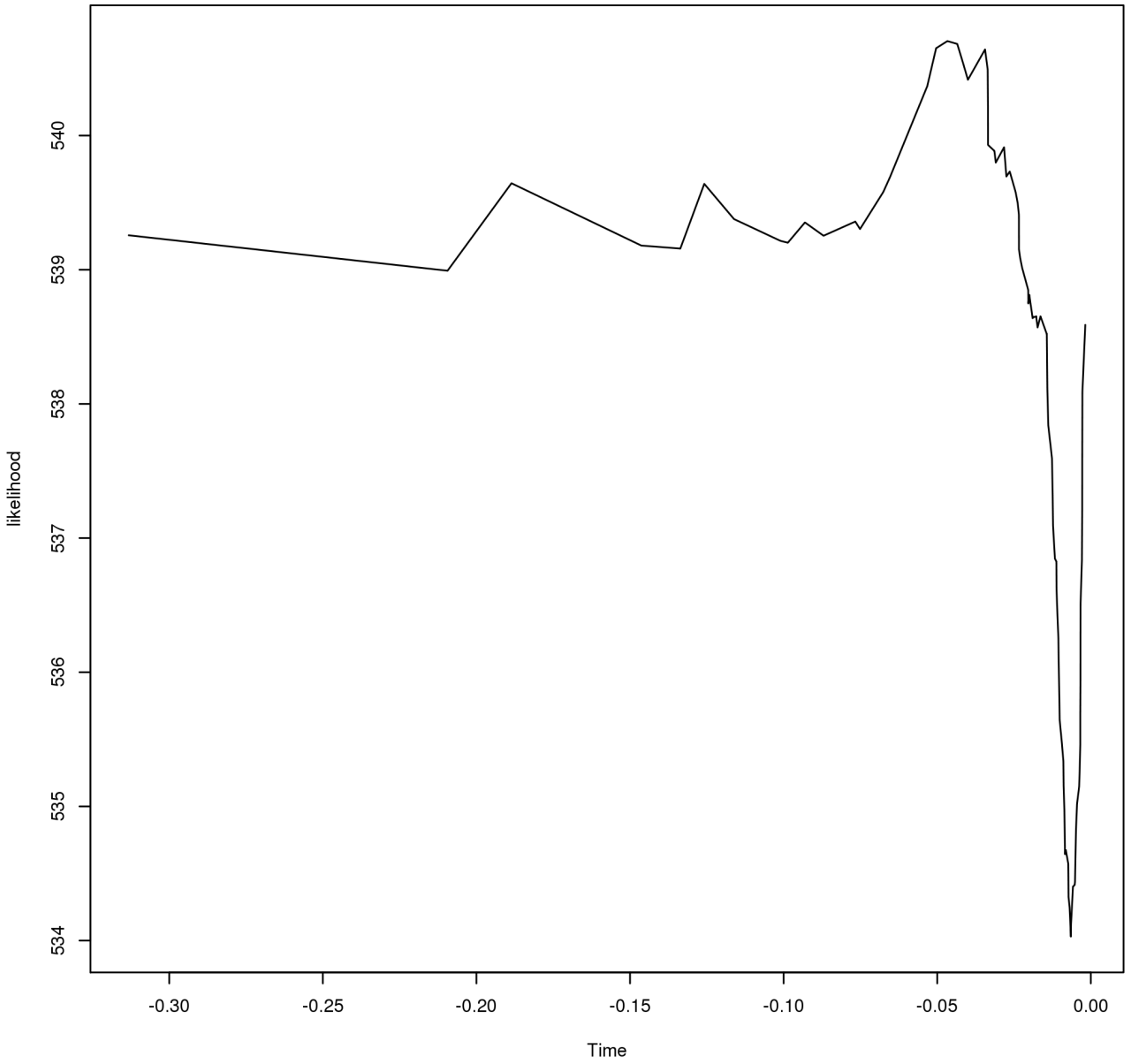

FIGURE S5 | (Continued)

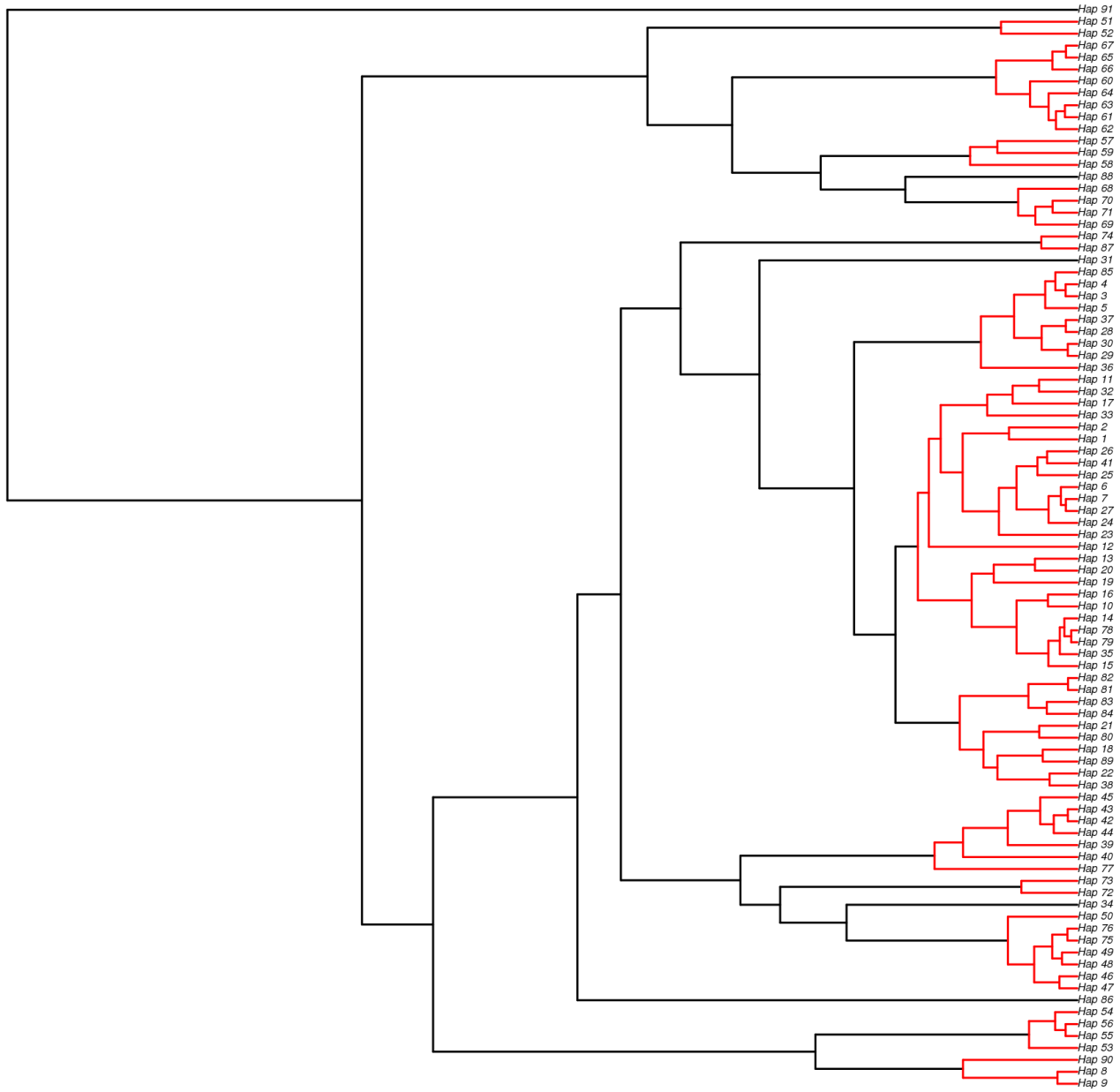

FIGURE S5 | (Continued)

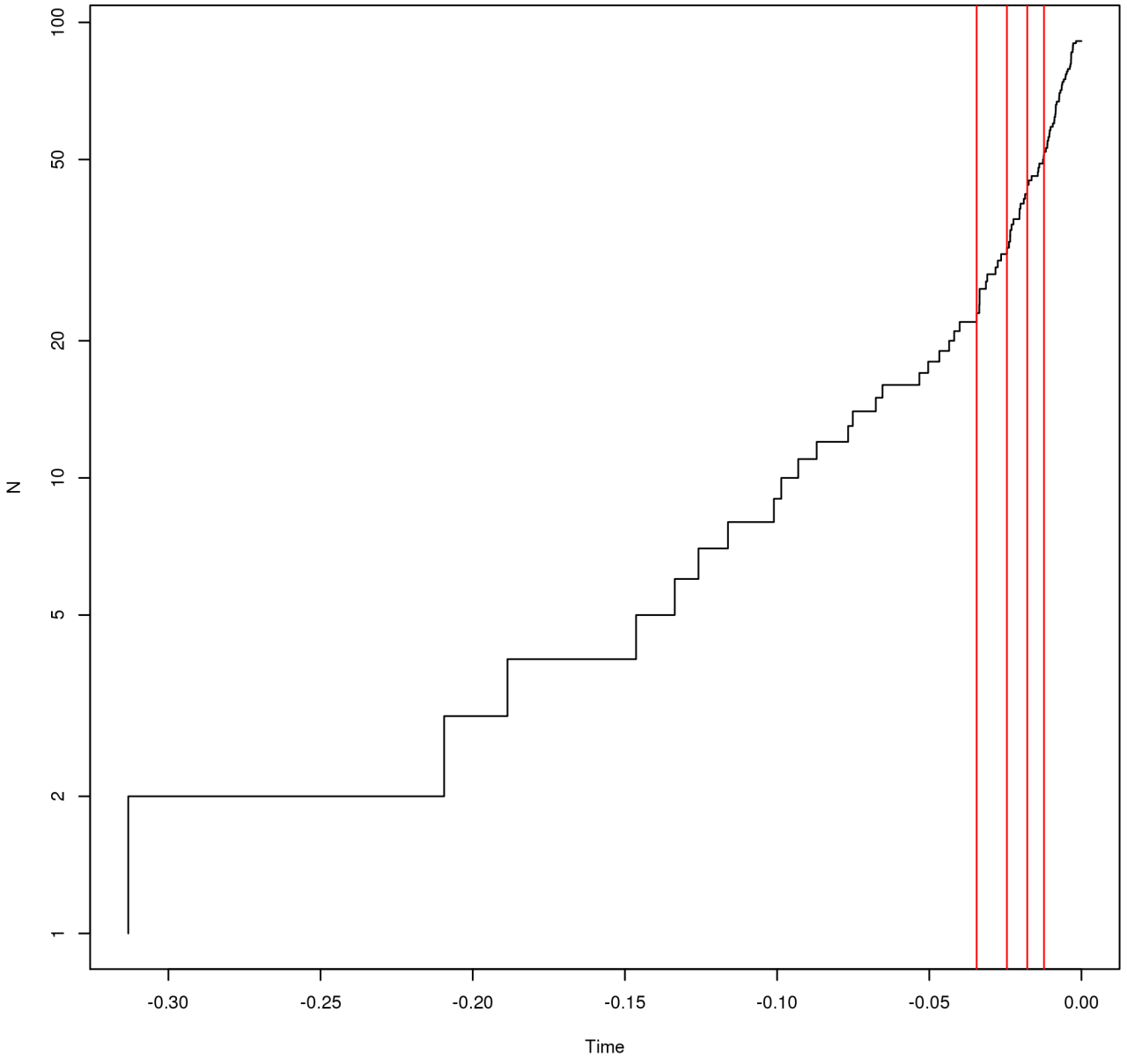

FIGURE S6 | Full results of the multiple-threshold (mGMYC) delimitation method.

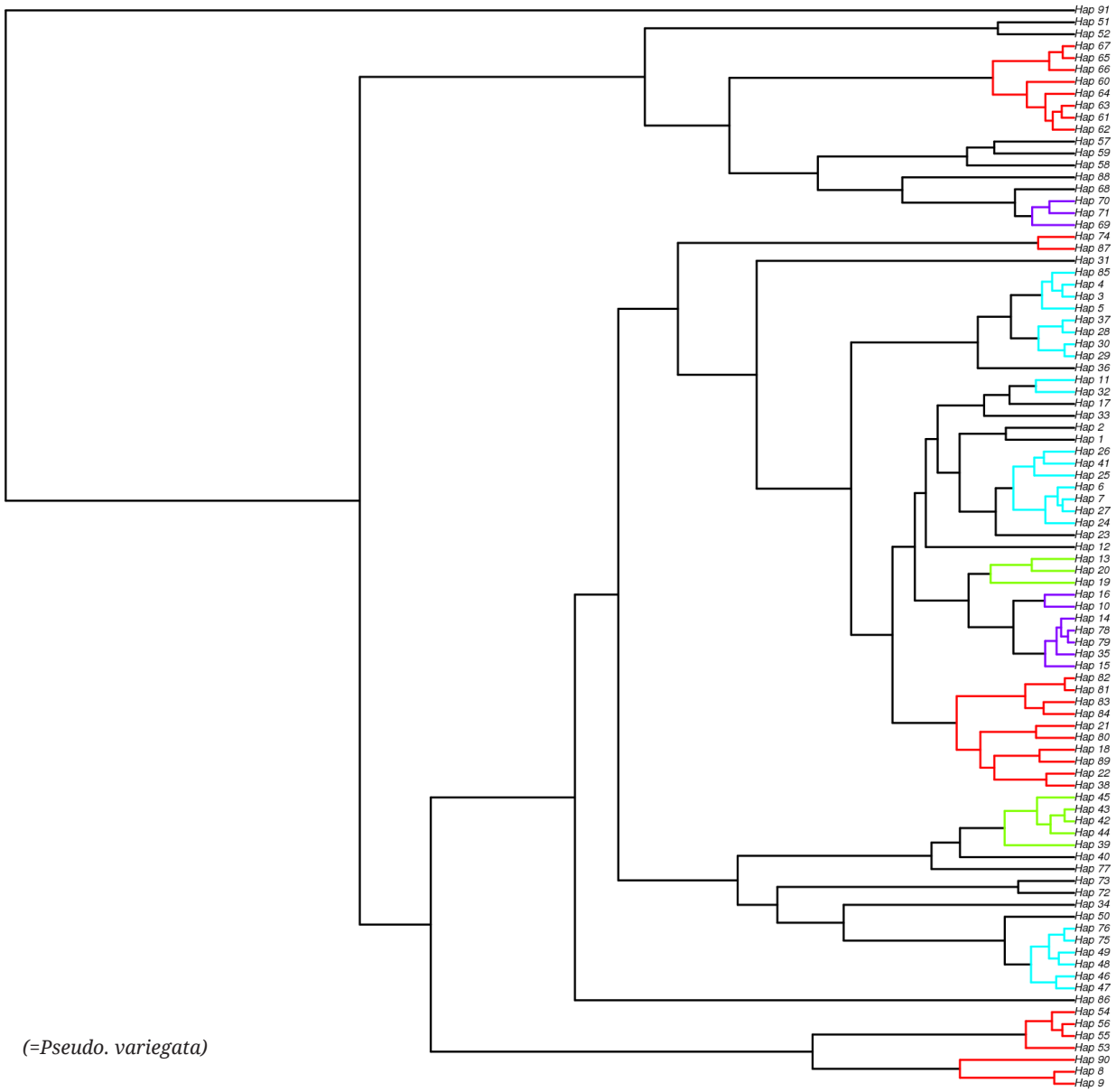

FIGURE S6 | Full results of the multiple-threshold (mGMYC) delimitation method.

Neotropical Ichthyology

OPEN ACCESS

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

Distributed under
Creative Commons CC-BY 4.0

© 2026 The Authors.
Published by SBI

SBI Official Journal of the Sociedade Brasileira de Ictiologia

HOW TO CITE THIS ARTICLE

- **Martins IC, Reis RB, Stabile BHM, Oliveira AV, Graça WJ.** Morphological and molecular evidence reveals two new species of *Cambeva* (Siluriformes: Trichomycteridae) from the rio Paraná basin, Paraná State, Brazil. Neotrop Ichthyol. 2026; 24(4):e250156. https://doi.org/10.1590/1982-0224-2025-0156