

**Table S1.** Summary of B chromosome studies in *P. scabripinnis* species complex.

Species	Methodology	Population	Reference	Year
<i>P. scabripinnis</i> , <i>P. paranae</i>	C, GE, MG, NGS	Cascatinha River	Silva et al. [21]	2021
<i>P. scabripinnis</i>	C, MC, Ep	Lavrinha stream	Barbosa et al. [76]	2021
<i>P. scabripinnis</i>	C, MC, ND	Lavrinha stream	Schemczssen-Graeff et al. [54]	2020
<i>P. scabripinnis</i>	C, MC, GE, RC	Lavrinha stream	Castro et al. [73]	2019
<i>P. scabripinnis</i>	MG	Lavrinha stream	Limeira et al. [90]	2019
<i>P. scabripinnis</i>	MC, GE	Lavrinha stream	Castro et al. [72]	2019
<i>P. scabripinnis</i>	C, MC, SR	Lavrinha stream	Cornelio et al. [78]	2017
<i>P. scabripinnis</i>	C, MC	Lavrinha stream, Lake of Pedalinho, Perdizes stream	Barbosa et al. [66]	2017
<i>P. scabripinnis</i>	C	São Francisco River	Klassmann and Martins-Santos [88]	2017
<i>P. scabripinnis</i>	C, MC	Lavrinha stream, Ribeirao Grande stream, Tatupeba stream	Barbosa et al. [77]	2015
<i>P. scabripinnis</i>	C, MC, MO	Ribeirão Grande stream	Castro et al. [79]	2014
<i>P. scabripinnis</i>	C, MC, M	Pedra's stream	Vicari et al. [62]	2011
<i>P. scabripinnis</i>	C	Tatupeba stream	Fernandes and Martins-Santos [89]	2005
<i>P. scabripinnis</i>	Review	Review	Moreira-Filho et al. [34]	2004
<i>P. scabripinnis</i>	C, MC	Lavrinha stream, Capivari stream, Carpas lake, Fojo stream	Ferro et al. [45]	2003
<i>P. scabripinnis</i>	C	São Domingos stream	Alves and Martins-Santos [103]	2002
<i>P. scabripinnis</i>	C	Jataí stream	Araújo and Morelli [104]	2000
<i>P. scabripinnis</i>	C, MC, M	Pedra's stream	Mestriner et al. [40]	2000
<i>P. scabripinnis</i>	C, GV	Ribeirão Grande stream	Néo et al. [44]	2000
<i>P. scabripinnis</i>	C, GV	Ribeirão Grande stream	Néo et al. [51]	2000
<i>P. scabripinnis</i>	C	Yukatan stream	Mizoguchi and Martins-Santos [105]	1997
<i>P. scabripinnis</i>	C	Piracuama stream	Souza and Moreira-Filho [106]	1995
<i>P. scabripinnis</i>	C	Córrego das Pedras	Fauaz et al. [107]	1994
<i>P. scabripinnis</i>	C, SR	Jucu River	Rocon-Stange and Almeida Toledo [46]	1993
<i>P. scabripinnis</i>	C	Córrego das Pedras	Salvador and Moreira-Filho [38]	1992
<i>P. paranae</i>	T, D	Cascatinha River	Goes et al. [50]	2021
<i>P. paranae</i>	MC, MG	Cascatinha River	Goes et al. [108]	2021
<i>P. paranae</i>	MC, M, GE	Cascatinha River	Silva et al. [67]	2021

<i>P. paranae</i>	MC	Capivara River	Silva et al. [43]	2017
<i>P. paranae</i>	C, MC, MG	Capivara River	Silva et al. [63]	2016
<i>P. paranae</i>	C, MC, MG	Capivara River	Silva et al. [8]	2014
<i>P. paranae</i>	C, MC	Tagaçaba stream	Abelini et al. [109]	2014
<i>P. paranae</i>	C	Cascatinha River	Santos et al., [53]	2012
<i>P. paranae</i>	C	Cascatinha River	Maistro et al. [42]	2000
<i>P. paranae</i>	C	Cascatinha River	Maistro et al. [41]	1999
<i>P. paranae</i>	C, GV	Cascatinha River	Porto-Foresti et al. [49]	1997
<i>P. paranae</i>	C	Cascatinha River	Maistro et al. [48]	1994
<i>P. paranae</i>	C	Araquá River	Maistro et al. [110]	1994
<i>P. paranae</i>	C	Araquá River	Maistro et al. [111]	1992

C = cytogenetics, GE = gene expression, MG = molecular genetics, NGS = next generation sequencing, MC = molecular cytogenetics, Ep = epigenetics, ND = nuclear dynamic, RC = reproductive cycle, SR = sex-ratio, MO = morphometry, M = meiosis, GV = geographic variation, T = transmission, D = dynamics.

**Table S2.** Diversity of B chromosomes in *Psalidodon* genus.

Species	Population	River Basin	County	2n	Bs	Size	Shape	Reference
<i>P. bockmanni</i>	Água da Madalena stream	Paranapanema River	Botucatu, BRA	50	0-1	large	m	Silva et al. [63]
<i>P. bockmanni</i>	Alambari River	Paranapanema River	Bauru, BRA	50	0-1	micro	a	Hashimoto et al. [112]
<i>P. bockmanni</i>	Alambari River	Paranapanema River	Bauru, BRA	50	0-1	large	m	Daniel et al. [113]
<i>P. correntinus</i>	Iguaçu River	Paraná River	Foz do Iguaçu, BRA	36	0-1	large	sm	Ahmad et al. [114]
<i>P. eigenmanniorum</i>	Caetano Stream	Paraíba River	Uberlândia, BRA	48	0-2	large	m	Torres-Mariano and Morelli [115]
<i>P. fasciatus</i>	Água da Madalena stream	Paranapanema River	Botucatu, BRA	45-48	0-1	large	m	Silva et al. [63]
<i>P. fasciatus</i>	Água da Madalena stream	Paranapanema River	Botucatu, BRA	45-48	0-1	medium	sm	Silva et al. [63]
<i>P. fasciatus</i>	Alambari River	Paranapanema River	Bauru, BRA	46	0-1	medium	a	Hashimoto et al. [112]
<i>P. fasciatus</i>	Araras stream	Paranapanema River	Araras, BRA	48	0-1	large	m	Silva et al. [63]
<i>P. paranae</i>	Araquá River	Tietê River	Botucatu, BRA	50	0-1	large	m	Maistro et al. [110]
<i>P. paranae</i>	Araquá River	Tietê River	Botucatu, BRA	50	0-1	large	m	Maistro et al. [111]
<i>P. paranae</i>	Capivara River	Tietê River	Botucatu, BRA	50	0-1	macro	m/sm	Silva et al. [8]

<i>P. paranae</i>	Cascatinha River	Tietê River	Botucatu, BRA	50	0-2	large	m	Maistro et al. [48]
<i>P. paranae</i>	Cascatinha River	Tietê River	Botucatu, BRA	50	0-1	medium	a	Santos et al. [53]
<i>P. paranae</i>	Tagaçaba Stream	Ivaí River	Maringá, BRA	50	0-1	large	m	Abelini et al. [109]
<i>P. scabripinnis</i>	Lavrinha stream	Paraíba do Sul River	Campos do Jordão, BRA	50	0-1	large	m/sm	Ferro et al. [45]
<i>P. scabripinnis</i>	Capivari stream	Sapucaí-Guaçu River	Campos do Jordão, BRA	50	0-1	large	m	Ferro et al. [45]
<i>P. scabripinnis</i>	Carpas lake	Sapucaí-Guaçu River	Campos do Jordão, BRA	50	0-1	large	m/sm	Ferro et al. [45]
<i>P. scabripinnis</i>	Fojo stream	Sapucaí-Guaçu River	Campos do Jordão, BRA	50	0-1	large	m/sm	Ferro et al. [45]
<i>P. scabripinnis</i>	Fojo stream	Sapucaí-Guaçu River	Campos do Jordão, BRA	50	0-2	medium	m	Ferro et al. [45]
<i>P. scabripinnis</i>	Ribeirão Grande stream	Paraíba do Sul River	Campos do Jordão, BRA	50	0-2	large	m/sm	Néo et al. [44]
<i>P. scabripinnis</i>	Ribeirão Grande stream	Paraíba do Sul River	Campos do Jordão, BRA	50	0-1	medium	m	Néo et al. [44]
<i>P. scabripinnis</i>	Jataí stream	Paranaíba River	Uberlândia, BRA	50	0-1	small	a	Araújo and Morelli [104]
<i>P. scabripinnis</i>	Jucu River	Jucu River	Vitor Hugo, BRA	50	0-4	micro	a	Rocon-Stange and Almeida Toledo [46]
<i>P. scabripinnis</i>	Pedra's stream	Sapucaí river	Campos do Jordão, BRA	50	0-2	large	m	Salvador and Moreira-Filho [38]
<i>P. scabripinnis</i>	Piracuama stream	Paraíba do Sul River	Pindamonhangaba	50	0-1	large	m	Souza and Moreira-Filho [106]
<i>P. scabripinnis</i>	São Domingos stream	Ivaí River	Maringá, BRA	48	0-1	small	m	Alves and Martins-Santos [103]
<i>P. scabripinnis</i>	Tatupeba stream	Ivaí River	Marialva, BRA	50	0-1	large	m	Fernandes and Martins-Santos [64]
<i>P. scabripinnis</i>	Tatupeba stream	Ivaí River	Marialva, BRA	46	0-1	small	a	Fernandes and Martins-Santos [64]
<i>P. scabripinnis</i>	Tatupeba stream	Ivaí River	Marialva, BRA	48	0-1	medium	st/a	Fernandes and Martins-Santos [64]
<i>P. scabripinnis</i>	Yukatan stream	Ivaí River	Marialva, BRA	50	0-1	large	m	Mizoguchi and Martins-Santos [105]
<i>P. schubarti</i>	Paraná River	Paraná River	Misiones, ARG	36	0-1	large	m	Moreira-Filho et al. [116]
<i>P. sp. B</i>	Salto Caxias reservoir, Iguazu River	Paraná River	Foz do Iguazu, BRA	50	1-2	large	m	Fazoli et al. [117]
<i>P. sp. B</i>	Salto Caxias reservoir, Iguazu River	Paraná River	Foz do Iguazu, BRA	50	1-2	small	sm	Fazoli et al. [117]
<i>P. sp. B</i>	Salto Caxias reservoir, Iguazu River	Paraná River	Foz do Iguazu, BRA	50	1-2	micro	a	Fazoli et al. [117]

2n = diploid chromosome number. Bs = number of B chromosomes. a = acrocentric. m = metacentric. sm = submetacentric. st = subtelocentric.