

# Supplementary Materials

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**Supplementary Table S1.** Sample list of *Reinboldiella* species

Species / Voucher	Collection information	<i>rbcL</i>	<i>cox1</i>	Host information			Reference
				Species	<i>rbcL</i>	<i>cox1</i>	
<i>Reinboldiella koreana</i> S. Y. Kim & M. S. Kim sp. nov.							
2003-032ep1	Gijjang, Busan, Korea; Mar 22, 2020	PP400814	-	<i>Pachymeniopsis lanceolata</i>	PP400820	-	This study
2005-050ep1	Odori, Pohang, Korea; May 17, 2020	PP400816	PP400802	<i>P. lanceolata</i>	PP400819	PP400810	This study
2005-051ep	Odori, Pohang, Korea; May 17, 2020	-	PP400802	<i>P. lanceolata</i>	-	PP400810	This study
2104-018ep	Youngdo, Busan, Korea; Mar 31, 2021	PP400815	-	<i>P. lanceolata</i>	PP400820	-	This study
2104-086ep	Jangji, Geumodo, Korea; Apr 27, 2021	PP400812	PP400803	<i>Pachymeniopsis elliptica</i>	PP400821	PP400807	This study
2104-093ep1	Andori, Ando, Korea; Apr 27, 2021	PP400811	PP400804	<i>P. elliptica</i>	PP400821	PP400807	This study
2104-093ep2	Andori, Ando, Korea; Apr 27, 2021	PP400812	PP400803	<i>P. elliptica</i>	-	(= PP400807)	This study
2105-064ep	Gooduckpo, Busan, Korea; May 19, 2021	PP400817	-	<i>P. lanceolata</i>	-	-	This study
2106-052ep	Sanpori, Uljin, Korea; Jun 26, 2021	PP400817	PP400802	<i>P. lanceolata</i>	-	PP400810	This study
2204-007ep	Gijjang, Busan, Korea; Apr 1, 2022	PP400814	PP400805	<i>P. lanceolata</i>	PP400820	-	This study
2204-010ep	Gijjang, Busan, Korea; Apr 1, 2022	PP400814	PP400805	<i>P. lanceolata</i>	PP400820	-	This study
2204-014ep	Gijjang, Busan, Korea; Apr 1, 2022	PP400814	PP400805	<i>P. lanceolata</i>	PP400820	-	This study
2204-019ep	Gijjang, Busan, Korea; Apr 1, 2022	PP400814	PP400805	<i>P. lanceolata</i>	PP400820	-	This study
2302-010ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2302-011ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2302-012ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400808	This study
2302-015ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2302-016ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2302-017ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2302-018ep	Gijjang, Busan, Korea; Feb 7, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2303-001enR	Gijjang, Busan, Korea; Mar 8, 2020	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2303-003enR	Gijjang, Busan, Korea; Mar 8, 2021	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2303-005enR	Gijjang, Busan, Korea; Mar 8, 2022	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study

Supplementary Table S1. Continued

Species / Voucher	Collection information	<i>rbcL</i>	<i>cox1</i>	Host information			Reference
				Species	<i>rbcL</i>	<i>cox1</i>	
2303-007enR	Gijjang, Busan, Korea; Mar 8, 2023	-	PP400805	<i>P. elliptica</i>	PP400821	PP400807	This study
2303-009epR	Gijjang, Busan, Korea; Mar 8, 2023	-	PP400805	<i>Grateloupia asiatica</i>	PP400818	-	This study
2303-017epR	Samjeongri, Pohang, Korea; Mar 16, 2023	-	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2304-001epR	Gijjang, Busan, Korea; Apr 6, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2304-005epR	Gijjang, Busan, Korea; Apr 6, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2304-008epR	Gijjang, Busan, Korea; Apr 6, 2023	PP400814	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2304-009epR	Gijjang, Busan, Korea; Apr 6, 2023	-	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2304-010epR	Gijjang, Busan, Korea; Apr 6, 2023	-	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2304-012epR	Gijjang, Busan, Korea; Apr 6, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	-	This study
2305-008epR	Seockbyoungri, Pohang, Korea; May 2, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2305-009epR1	Seockbyoungri, Pohang, Korea; May 2, 2023	PP400814	PP400805	<i>P. elliptica</i>	PP400821	PP400807	This study
2305-009epR2	Seockbyoungri, Pohang, Korea; May 2, 2023	-	PP400805	<i>P. elliptica</i>	-	(= PP400807)	This study
2305-020epR	Gijjang, Busan, Korea; May 4, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	-	This study
2305-021epR	Gijjang, Busan, Korea; May 4, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2305-074epR	Seonchang, Ulleungdo, Korea; May 26, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2307-011epR	Samjeongri, Pohang, Korea; Jul 12, 2023	PP400814	PP400805	<i>P. elliptica</i>	PP400821	PP400807	This study
2307-012epR	Samjeongri, Pohang, Korea; Jul 12, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400810	This study
2307-013epR	Samjeongri, Pohang, Korea; Jul 12, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400810	This study
2307-014epR	Samjeongri, Pohang, Korea; Jul 12, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400810	This study
2307-015epR	Samjeongri, Pohang, Korea; Jul 12, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400810	This study
2307-023epR	Seockbyoungri, Pohang, Korea; Jul 26, 2023	-	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2307-025epR	Seockbyoungri, Pohang, Korea; Jul 26, 2023	-	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2307-026epR	Seockbyoungri, Pohang, Korea; Jul 26, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	PP400809	This study
2307-027epR	Seockbyoungri, Pohang, Korea; Jul 26, 2023	PP400814	PP400805	<i>P. lanceolata</i>	-	-	This study
2307-030epR	Samjeongri, Pohang, Korea; Jul 12, 2023	-	PP400805	<i>P. elliptica</i>	-	PP400807	This study
2309-001epR	Gijjang, Busan, Korea; Sep 14, 2023	-	PP400805	<i>P. elliptica</i>	PP400821	PP400809	This study
NIBRGR0000073022e	Hyeonnam, Yangyang, Korea; Feb 12, 2006	PP400817	PP400802	<i>G. turuturu</i>	PP400817	PP400806	This study
TC032	Gryongpo, Pohang, Korea; May 4, 1998	AY945772	-	NA	-	-	Cho et al. (2008)
R1	Gryongpo, Pohang, Korea; Jul 18, 2001	DQ787576	-	NA	-	-	Yang et al. (2016)
<i>Reinboldiella schmitziana</i> (Reinbold) DeToni							
RS-JP	Ashikajima, Choshi, Chiba Prefecture, Japan; Jul 5, 2009	LC201465	-	NA	-	-	Suzuki and Lin (2017)
<i>Reinboldiella warburgii</i> (Heydrich) T.Yoshida & Mikami							
RW-CJ	Chaojing, Keelung, Taiwan; Apr 28, 2009	LC201471	-	NA	-	-	Suzuki and Lin (2017)
NA	St. Taigo, Taipei, Taiwan; May 22, 2005	EF125878	-	<i>G. ramossissima</i>	-	-	Lin and Hommersand (2007)

**Supplementary Table S1.** Continued

Species / Voucher	Collection information	<i>rbcL</i>	<i>cox1</i>	Host information			Reference
				Species	<i>rbcL</i>	<i>cox1</i>	
<i>Reinboldiella orientalis</i> S.-M. Lin & Mas. Suzuki							
ROCJ1	Chaojing, Keelung, Taiwan; May 11, 2009	LC201456	-	NA	-	-	Suzuki and Lin (2017)
RO-CJ2	Chaojing, Keelung, Taiwan; Apr 27, 2016	LC201457	-	NA	-	-	Suzuki and Lin (2017)
RO-CJ3	Chaojing, Keelung, Taiwan; May 5, 2016	LC201458	-	<i>G. taiwanensis</i>	-	-	Suzuki and Lin (2017)
RO-CJ4	Chaojing, Keelung, Taiwan; May 5, 2016	LC201459	-	<i>G. taiwanensis</i>	-	-	Suzuki and Lin (2017)
RO-CJ5	Chaojing, Keelung, Taiwan; May 9, 2016	LC201460	-	NA	-	-	Suzuki and Lin (2017)
RO-CJ6	Chaojing, Keelung, Taiwan; May 9, 2016	LC201461	-	NA	-	-	Suzuki and Lin (2017)
RO-MK1	Makang, New Taipei City, Taiwan; May 22, 2005	LC201462	-	NA	-	-	Suzuki and Lin (2017)
RO-MK2	Makang, New Taipei City, Taiwan; Apr 25, 2016	LC201463	-	NA	-	-	Suzuki and Lin (2017)
RO-WLD	Wanlitong, Pintung, Taiwan; Feb 27, 2003	LC201464	-	NA	-	-	Suzuki and Lin (2017)
<i>Reinboldiella taiwanensis</i> S.-M. Lin & Mas. Suzuki							
RT-LDB	Lungdong Bay, Taiwan; Apr 15, 2009	LC201466	-	NA	-	-	Suzuki and Lin (2017)
RT-CJ1	Chaojing, Keelung, Taiwan; Apr 7, 2016	LC201467	-	<i>G. imbricata</i>	-	-	Suzuki and Lin (2017)
RT-CJ2	Chaojing, Keelung, Taiwan; Apr 7, 2016	LC201468	-	<i>G. imbricata</i>	-	-	Suzuki and Lin (2017)
RT-CJ3	Chaojing, Keelung, Taiwan; May 9, 2016	LC201469	-	NA	-	-	Suzuki and Lin (2017)
RT-CJ4	Chaojing, Keelung, Taiwan; May 9, 2016	LC201470	-	NA	-	-	Suzuki and Lin (2017)
<i>Reinboldiella filicula</i> (Harvey ex Womersley) Barros-Barreto & Maggs							
RB420054	Urca, Rio de Janeiro, Brazil	DQ458942	-	NA	-	-	Barros-Barreto et al. (2006, 2023)
XX1015	Williamstown, Melbourne, Australia	DQ458956	-	NA	-	-	Barros-Barreto et al. (2006, 2023)
HV06348	Mallacoota, VIC, Australia	MK125363	-	NA	-	-	Verbruggen and Costa (unpublished)

NA, not available.

Samples in bold are newly analyzed in this study.

**Supplementary Table S2.** Distance matrix among the species of *Reinboldiella* using 1,245 bp of *rbcL* gene

Species	1	2	3	4	5
<b>1. <i>Reinboldiella koreana</i> sp. nov.</b>	-	<b>2.1–2.2</b>	<b>2.9–3.1</b>	<b>4.0–4.3</b>	<b>4.3–4.8</b>
2. <i>R. taiwanensis</i>	26–28	-	2.7	3.2–3.4	3.5–3.9
3. <i>R. schmiziana</i>	36–38	34	-	3.7–3.8	3.7–4.0
4. <i>R. warburgii</i>	50–53	40–42	46–47	-	1.7–1.9
5. <i>R. orientalis</i>	54–60	43–48	46–50	21–24	-

Lower left is for absolute distance (bp) and upper right is for p-distance (%).

Bold type is newly analyzed in this study.