

Supplementary Table 1. New specimens' information for this study.

Sample name	Species	Sample location	Date of collection	Collector	Dataset	COXI accession number	ddRAD accession number
CH116	<i>Chordodes formosanus</i>	24°59'44.70"N, 121°34'49.49"E (Taipei Zoo)	25-12-2007	Ming-Chung Chiu	Both	OQ121057	SAMN32317068
MMN	<i>Chordodes formosanus</i>	24°4'21.8" N, 121°1'15.3" E (Huisun Forest Area, Ren'ai, Nantou)	21-08-2017	Ming-Hsun Chou	Both	OQ121072	SAMN32317088
CH413	<i>Chordodes formosanus</i>	24°00'29.3"N, 120°44'09.6"E (Nankan River, Wufeng, Taichung)	1-10-2018	Yong Zob Hang	Both	OQ121058	SAMN32317069
XCL	<i>Chordodes formosanus</i>	24°4'21.8" N, 121°1'15.3" E (Huisun Forest Area, Ren'ai, Nantou)	27-04-2019	Fu Cheng Yang	Both	OQ121081	SAMN32317102
MCCH01	<i>Chordodes formosanus</i>	24°59'44.70"N, 121°34'49.49"E (Taipei Zoo)	1-12-2019	Ming-Chung Chiu	COXI only	OQ121070	SAMN32317086 **
MCCH02	<i>Chordodes formosanus</i>	24°59'44.70"N, 121°34'49.49"E (Taipei Zoo)	1-12-2019	Ming-Chung Chiu	Both	OQ121071	SAMN32317087
CFHF01	<i>Chordodes formosanus</i>	24°49'55.62"N, 121°44'50.12"E (Wufengqi Waterfalls, Jiaoxi, Yilan)	2-06-2020	Ming-Chung Chiu	Both	OQ121056	SAMN32317067
ZTW	<i>Chordodes formosanus</i>	24°59'44.70"N, 121°34'49.49"E (Taipei Zoo)	30-06-2020	Ming-Chung Chiu	COXI only	OQ121083	SAMN32317104 **
XBF	<i>Chordodes formosanus</i>	25°13'10.1"N 121°37'17.4"E (Nanshihu, New Taipei)	30-06-2020	Ming-Chung Chiu	Both	OQ121080	SAMN32317101
DGL	<i>Chordodes formosanus</i>	25°14'28.2"N, 121°33'53.0"E (Shimen, New Taipei)	2-08-2020	Wei-Zhe Tseng	Both	OQ121059	SAMN32317072
BLM	<i>Chordodes formosanus</i>	25°14'28.2"N, 121°33'53.0"E (Shimen, New Taipei)	2-08-2020	Wei-Zhe Tseng	COXI only	OQ121052	SAMN32317063
GIW	<i>Chordodes formosanus</i>	25°05'46.7"N, 121°35'41.3"E (Dagouxi)	5-08-2020	Guan Jie Phang	Both	OQ121064	SAMN32317078

		Waterfront Park, Taipei)					
NAS	<i>Chordodes formosanus</i>	25°02'28.7"N, 121°36'43.0"E (Academia Sinica, Taipei)	7-08-2020	Wei-Zhe Tseng	Both	OQ121075	SAMN32317091
HMM	<i>Chordodes formosanus</i>	24°58'12.0"N, 121°35'31.2"E (Maokong, Taipei)	2-09-2020	Guan Jie Phang	Both	OQ121065	SAMN32317079
FMW	<i>Chordodes formosanus</i>	"Taipei"*	4-10-2020	Yao-De Shan	Both	OQ121062	SAMN32317076
MPW	<i>Chordodes formosanus</i>	"Taipei"*	4-10-2020	Yao-De Shan	Both	OQ121074	SAMN32317090
ZHW	<i>Chordodes formosanus</i>	"Taipei"*	4-10-2020	Yao-De Shan	COXI only	OQ121082	SAMN32317103 **
CAS	<i>Chordodes formosanus</i>	25°02'36.4"N 121°36'52.1"E (Academia Sinica, Taipei)	12-10-2020	Mattia De Vivo	Both	OQ121054	SAMN32317065
NOU	<i>Chordodes formosanus</i>	24°01'32.5"N, 120°50'40.6"E (Guoxing, Nantou)	25-10-2020	Wei-Zhe Tseng	Both	OQ121076	SAMN32317092
BDSN	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	Both	OQ121051	SAMN32317062
L1S	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	Both	OQ121068	SAMN32317083
LOG	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	Both	OQ121069	SAMN32317084
BRK	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	COXI only	OQ121053	SAMN32317064
2LM	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	COXI only	OQ121048	SAMN32317050
ALV	<i>Chordodes formosanus</i>	24°45'05.9"N, 121°39'50.9"E (Yuanshan, Yilan)	13-06-2021	Mattia De Vivo	Both	OQ121049	SAMN32317054
FRN	<i>Chordodes formosanus</i>	24°51'51.3"N, 121°47'57.6"E (Toucheng, Yilan)	29-06-2021	Zhao-Hui Lin	COXI only	OQ121063	SAMN32317077 **
TOU	<i>Chordodes formosanus</i>	24°51'51.3"N, 121°47'57.6"E (Toucheng, Yilan)	29-06-2021	Zhao-Hui Lin	COXI only	OQ121077	SAMN32317097 **
DVD	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jhihben National	24-08-2021	Mattia De Vivo	Both	OQ121060	SAMN32317074

		Forest Recreation Area, Taitung)					
MP04	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Mattia De Vivo	Both	OQ121073	SAMN32317089
VLC	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Mattia De Vivo	Both	OQ121078	SAMN32317098
AUX	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Mattia De Vivo	Both	OQ121050	SAMN32317061
KTV	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Guan Jie Phang	Both	OQ121067	SAMN32317081
WAV	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Zong-Yu Shen	Both	OQ121079	SAMN32317099
JPG	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Mỹ Hạnh Lê	Both	OQ121066	SAMN32317080
FLAC	<i>Chordodes formosanus</i>	22°41'14.5"N, 120°59'28.6"E (Jihben National Forest Recreation Area, Taitung)	24-08-2021	Zong-Yu Shen	Both	OQ121061	SAMN32317075
CCW	<i>Chordodes formosanus</i>	24°46'46.0"N, 121°41'53.6"E (Yuanshan, Yilan)	15-09-2021	Chiung-Wen Chang & Yen-Huei Den	COXI only	OQ121055	SAMN32317066 **
ATNM01	<i>Acutogordius taiwanensis</i>	24°49'55.62"N, 121°44'50.12"E (Wufengqi Waterfalls, Jiaoxi, Yilan)	2-06-2020	Ming-Chung Chiu	Both	OQ121045	SAMN32317060
KWAT	<i>Acutogordius taiwanensis</i>	24°49'55.62"N, 121°44'50.12"E (Wufengqi Waterfalls, Jiaoxi, Yilan)	11-08-2020	Brett Morgan	COXI only	OQ121046	SAMN32317082 **

M2WAT	<i>Acutogordius taiwanensis</i>	24°49'55.62"N, 121°44'50.12"E (Wufengqi Waterfalls, Jiaoxi, Yilan)	11-08-2020	Mattia De Vivo	Both	OQ121047	SAMN32317085
PWZ1	<i>Gordius chiashanus</i>	22°43'31.7"N, 120°45'26.9"E (Wutai, Pingtung)	4-02-2021	Wei-Zhe Tseng	ddRAD only	-	SAMN32317093
PWZ2	<i>Gordius chiashanus</i>	22°43'31.7"N, 120°45'26.9"E (Wutai, Pingtung)	4-02-2021	Wei-Zhe Tseng	COXI only	OQ121084	SAMN32317094 **
PWZ3	<i>Gordius chiashanus</i>	22°43'31.7"N, 120°45'26.9"E (Wutai, Pingtung)	4-02-2021	Wei-Zhe Tseng	ddRAD only	-	SAMN32317095

The * indicates that the host of the worm (*Hierodula patellifera*) was found in Academia Park, Taipei (25°02'49.5"N, 121°36'48.0"E) on 24-08-2020 and we were unaware of the infection until the worm matured. The date indicates when the worms emerged.

The ** indicates that the reads were less than 200.000 or presented bad quality and therefore such samples were not used in ddRAD analyses

For two *G. chiashanus* specimens, COXI amplification was unsuccessful. However, the three worms were found together and therefore we assumed conspecificity

Supplementary Table 2. List of GenBank sequences used in this study.

GenBank accession number	Species	Source
HM044104	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044105	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044106	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044107	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044108	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044109	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044110	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044111	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044112	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044113	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044114	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044115	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044116	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044117	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044118	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)

HM044119	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044120	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044121	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044122	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044123	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044124	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044125	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044126	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044127	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HM044128	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HQ322115	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
HQ322116	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808194	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808195	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808196	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808197	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808198	<i>Chordodes</i>	Chiu <i>et al.</i> (2011)

	<i>formosanus</i>	
JF808199	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808200	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808201	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808202	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808203	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808204	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
JF808205	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2011)
KU509484	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2016)
KU509485	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2016)
KU509486	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2016)
KU509487	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2016)
KU509488	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2016)
KX591949	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2017)
KX591950	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2017)
KX591951	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2017)
KX591952	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2017)

KX591953	<i>Chordodes formosanus</i>	Chiu <i>et al.</i> (2017)
OQ121048	<i>Chordodes formosanus</i>	This study
OQ121049	<i>Chordodes formosanus</i>	This study
OQ121050	<i>Chordodes formosanus</i>	This study
OQ121051	<i>Chordodes formosanus</i>	This study
OQ121052	<i>Chordodes formosanus</i>	This study
OQ121053	<i>Chordodes formosanus</i>	This study
OQ121054	<i>Chordodes formosanus</i>	This study
OQ121055	<i>Chordodes formosanus</i>	This study
OQ121056	<i>Chordodes formosanus</i>	This study
OQ121057	<i>Chordodes formosanus</i>	This study
OQ121058	<i>Chordodes formosanus</i>	This study
OQ121059	<i>Chordodes formosanus</i>	This study
OQ121060	<i>Chordodes formosanus</i>	This study
OQ121061	<i>Chordodes formosanus</i>	This study
OQ121062	<i>Chordodes formosanus</i>	This study
OQ121063	<i>Chordodes</i>	This study

	<i>formosanus</i>	
OQ121064	<i>Chordodes formosanus</i>	This study
OQ121065	<i>Chordodes formosanus</i>	This study
OQ121066	<i>Chordodes formosanus</i>	This study
OQ121067	<i>Chordodes formosanus</i>	This study
OQ121068	<i>Chordodes formosanus</i>	This study
OQ121069	<i>Chordodes formosanus</i>	This study
OQ121070	<i>Chordodes formosanus</i>	This study
OQ121071	<i>Chordodes formosanus</i>	This study
OQ121072	<i>Chordodes formosanus</i>	This study
OQ121073	<i>Chordodes formosanus</i>	This study
OQ121074	<i>Chordodes formosanus</i>	This study
OQ121075	<i>Chordodes formosanus</i>	This study
OQ121076	<i>Chordodes formosanus</i>	This study
OQ121077	<i>Chordodes formosanus</i>	This study
OQ121078	<i>Chordodes formosanus</i>	This study
OQ121079	<i>Chordodes formosanus</i>	This study

OQ121080	<i>Chordodes formosanus</i>	This study
OQ121081	<i>Chordodes formosanus</i>	This study
OQ121082	<i>Chordodes formosanus</i>	This study
OQ121083	<i>Chordodes formosanus</i>	This study
KX591922	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591923	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591924	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591925	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591926	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591927	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591928	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591929	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591930	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591931	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591932	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591933	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591934	<i>Acutogordius</i>	Chiu <i>et al.</i> (2017)

	<i>taiwanensis</i>	
KX591935	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591936	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591937	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591938	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591939	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591940	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591941	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591942	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591943	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591944	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591945	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591946	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591947	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
KX591948	<i>Acutogordius taiwanensis</i>	Chiu <i>et al.</i> (2017)
MF983649	<i>Acutogordius taiwanensis</i>	Reported as "Myanmar Terrestrial Invertebrates", by Slapcinsky and Mulcahy
OQ121045	<i>Acutogordius taiwanensis</i>	This study

OQ121046	<i>Acutogordius taiwanensis</i>	This study
OQ121047	<i>Acutogordius taiwanensis</i>	This study
MN784816	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784817	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784818	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784819	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784820	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784821	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784822	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784823	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784824	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784825	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784826	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784827	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784828	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784829	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784830	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784831	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784832	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784833	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784834	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784835	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)

MN784836	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784837	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784838	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784839	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
MN784840	<i>Gordius chiashanus</i>	Chiu <i>et al.</i> (2020)
OQ121084	<i>Gordius chiashanus</i>	This study

Supplementary Table 3. Statistics outputted by PopArt.

Species	Nucleotide diversity (π)	Number of segregating sites	Number of parsimony-informative sites	Tajima's D statistic	p
<i>Acutogordius taiwanensis</i>	0.0010493	11	4	-2.69148	0.999976
<i>Chordodes formosanus</i>	297585	54	30	3.89E+07	0
<i>Gordius chiashanus</i>	67063.1	30	23	1.21E+07	0

Supplementary Table 4. Best COXI substitution model per each species/population according to AIC, BIC and AICc.

Species	AIC model	AIC score	BIC model	BIC score	AICc model	AICc score
<i>Acutogordius taiwanensis</i>	HKY+I	1328.5525	HKY	1575.9382	HKY+I	1350.5525
<i>Chordodes formosanus</i> (Taiwan)	TrN+G4	2319.2533	HKY+G4	2958.1793	TrN+G4	2499.2533
<i>Chordodes formosanus</i> (Japan)	TIM1	1341.3002	TIM1	1418.6442	TIM1	1342.3002
<i>Gordius chiashanus</i>	TPM3uf+I	1741.6373	HKY+I	1955.9037	TPM3uf+I	1759.6373