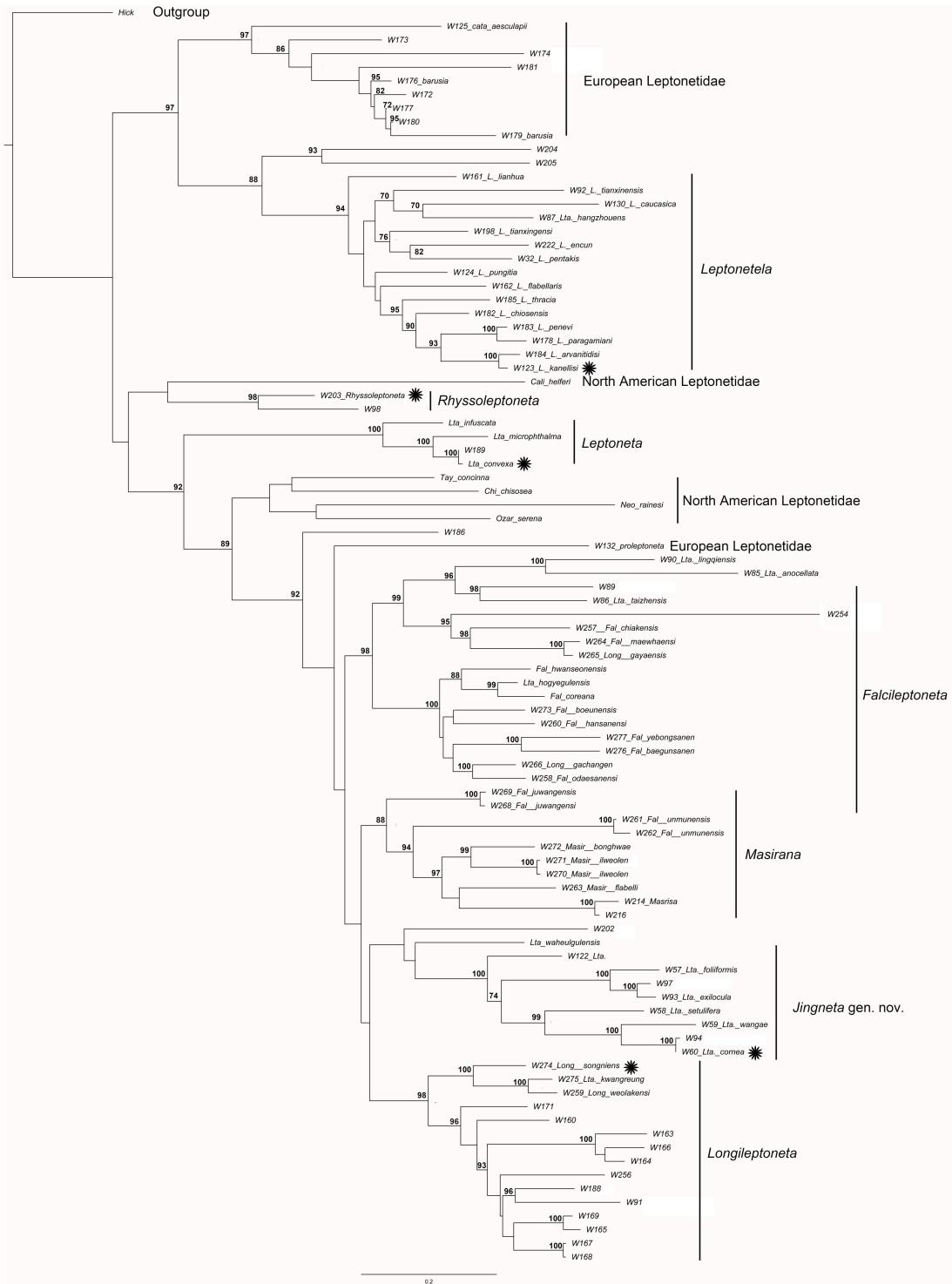


Supplementary material



Supplementary Figure S1 Maximum-likelihood tree of 57 taxa of Leptonetidae
 Each genus is indicated by black bar. BS<70 not shown, taxa followed by asterisk indicate type species of corresponding genus. BS: Bootstrap support.

Supplementary Table S1 List of voucher information and GenBank accession Nos.

Voucher	Taxa	Locality	Coordinates	18S	28S	16S	COI	H3
W32	<i>Leptonetela pentakis</i>	Sanxing Cave, Guizhou, China	27.05 N/106.30E	MT968689	MT968579		MT988002	MT995824
W57	<i>Jingneta folliformis</i>	Yunshui Cave, Beijing, China	39.67 N/115..81E	MT968702	MT968580	MT968630	MT988003	MT995825
W58	<i>Jingneta setulifera</i>	Beipo Cave, Beijing, China	39.71 N/115..63E	MT968691	MT968581	MT968631	MT988004	MT995826
W59	<i>Jingneta wangae</i>	Zhizhu Cave, Beijing, China	39.71 N/115..74E	MT968692	MT968582	MT968632	MT988005	MT995827
W60	<i>Jingneta cornea</i>	Shenxian Cave, Beijing, China	39.86 N/115..68E	MT968693	MT968583		MT988006	MT995828
W61	<i>Jingneta exilocula</i>	Bianfu Cave, Beijing, China	39.48 N/115..54E				MT988007	
W85	<i>Falcileptoneta anocellata</i>	Shuanglong, Zhejing, China	29.10N/119.60E	MT968694			MT988008	MT995829
W86	<i>Falcileptoneta taizhensis</i>	Taizhen, Zhejing, China	28.9N/118.8 E	MT968695		MT968633	MT988009	MT995830
W87	<i>Leptonetela hangzhouensis</i>	Shiyan Cave, Anhui, China	29.75N/118.39E	MT968696		MT968634	MT988010	MT995831
W89	Falcileptoneta sp2	Taizhen, Zhejing, China (with eyes)	28.9N/110.8 E	MT968697	MT968584		MT988011	
W90	<i>Falcileptoneta lingqiensis</i>	Lingqi Cave, Zhejing, China	29.07N/119.2E	MT968698	MT968585		MT988012	MT995832
W91	Longileptoneta sp5	Shuanglong Cave, Zhejiang, China	W91 sp	MT968699			MT988013	MT995833
W92	<i>Leptonetela tianxinensis</i>	Tianxin Cave, Henan, China	33.35N/111.88E	MT968700			MT988014	
W93	Jingneta sp2	Maxian Cave, Beijing, China		MT968701			MT988015	MT995834
W94	<i>Jingneta cornea</i>	Xipo Cave, Beijing, China	39.69 N/115..67E	MT968703			MT988016	
W97	<i>Jingneta caoxianensis</i> sp. nov	Caoxian Cave, Beijing, China	34.44 N/114.03E	MT968704	MT968586	MT968635	MT988017	MT995835
W98	<i>Rhyssoleptoneta latitarsa</i>	Zhangshijian, Hehei, China	32.44 N/114..03E	MT968705		MT968636	MT988018	MT995836
W122	<i>Jingneta jingdongensis</i> sp. nov	Jingdongdarong Cave, Beijing, China	40.21 N/117.25E	MT968637	MT968532	MT968587	MT987953	MT995791
W123	<i>Leptonetela kanellisi</i>	Koitiki Cave, Attika, Greece	38.24 N/26.01E	MT968638	MT968533	MT968588		MT995792
W124	<i>Leptonetela pungitia</i>	Dao Tao Natural Park, Vietnam	21.47N/105.64E	MT968639			MT987954	
W125	<i>Cataleptoneta aesculapii</i>	Damlatas cave, Antalya, Turkey	36.53N/31.98E	MT968640			MT987955	MT995793
W130	<i>Leptonetela caucasica</i>	Carpinus-fagus forest, greorgia	42.33N/42.03E	MT968641			MT987956	
W132	<i>Proleptoneta sp</i>	Cave Kontrabasa, lovetch District, Bulgaria	43. 17N/ 24.06E					MT995794

W160	<i>Longileptoneta yerenensis</i> sp. nov	Yeren Cave, Jiangxi, China	25.65N/115.20E	MT968642	MT968534	MT987957	MT995795
W161	<i>Leptonetela lianhua</i>	Lianhua Cave, Jiangxi, China	25.47N/114.08E	MT968643	MT968535	MT987958	
W162	<i>Leptonetela flabellaris</i>	Shiyan Cave, Jiangxi, China	26.60N/114.20E	MT968644	MT968536	MT987959	
W163	<i>Longileptoneta huangshanensis</i> sp.	Huangshan Cave, Jiangxi, China	26.48N/115.91E	MT968645	MT968537	MT968589	MT987960
W164	<i>Longileptoneta</i> sp1	Taiping Cace, Jiangxi, China	25.48N/115.91E	MT968646	MT968538	MT968590	MT987961
W165	<i>Longileptoneta zhuxianensis</i> sp. nov	Zhuxian Cave, Jiangxi, China	29.21'N/117.30E;	MT968647	MT968539	MT968591	MT987962
W166	<i>Longileptoneta</i> sp2	Taiping Yan, Jiangxi, China	26.40N/115.77E	MT968648	MT968540	MT968592	MT987963
W167	<i>Longileptoneta gutanensis</i> sp. nov	Lianhua Cave, Jiangxi, China	29.48N/117.61E	MT968649	MT968541	MT968593	MT987964
W168	<i>Longileptoneta gutanensis</i> sp. nov	Hanxu Cave, Jiangxi, China	29.48N/117.61E	MT968650	MT968542	MT968594	MT987965
W169	<i>Longileptoneta zhuxianensis</i> sp. nov	Huangyuan Cave, Jiangxi, China	29.03'N/117.37E;	MT968651	MT968543	MT968595	MT987966
W172	<i>Barusia</i> sp1	Doxa spileon, Crete, Greece	35.33N/24.98E			MT968597	MT995801
W171	<i>Longileptoneta</i> sp3	Anshi Cave, Jiangxi, China	26.52N/115.10E	MT968652		MT968596	MT987967
w173	<i>Barusia</i> sp2	Katafygi Cave, Peloponnese, Greece	35.80N/22.28E		MT968544	MT968598	
W174	<i>Barusia</i> sp3	Kaiadas Cave, Peloponnese, Greece	35.08N/22.33E	MT968653		MT968599	MT987968
W176	<i>Barusia</i> sp4	32.69 km west of Chania, Crete, Greece	35.40N/23.68E			MT968600	
w177	<i>Barusia</i> sp5	Spilaio Lera Cave, Crete, Greece	35.58N/24.10E		MT968545	MT968601	
W178	<i>Leptonetela paragamiani</i>	Pan Cave, Athens, Greece	38.15N/23.67E	MT968654	MT968546	MT987969	
W179	<i>Barusia</i> sp6	Ahyospilos Cave, Crete, Greece	35.58N/24.13E	MT968655	MT968547	MT987970	
W180	<i>Barusia</i> sp7	Spilaio Panagias Arkoudiotisas, Cave, Crete,	35.59N/24.14E			MT968602	MT987971
W181	<i>Barusia</i> sp8	Kournas Cave, Crete, Greece	35.32N/24.28E			MT968603	MT995803
W182	<i>Leptonetela chiosensis</i>	Agiogala Cave, Chios Island, Greece	38.56N/25.86E	MT968657	MT968549	MT987972	
W183	<i>Leptonetela penevi</i>	Skoteini Cave, Thiva, Greece	38.50N/23.98E	MT968658	MT968550	MT987973	
W184	<i>Leptonetela arvanitidis</i>	Leondari, Athens, Greece	37.99N/23.83E	MT968659		MT987974	
W185	<i>Leptonetela thracia</i>	Maroneia Cave, Komotini, Greece	40.93N/25.50E	MT968660		MT968604	MT987975

W186	Leptonetidae gen	Taiwan	<i>W186</i>		MT968605
W188	<i>Longileptoneta shenxianensis</i> sp. nov	Shenxian Cave, Anhui, China	30.38N/118.23E	MT968661	
W189	<i>Leptoneta convexa</i>	Grotte de Liqué, middle-pyrénées, France:	<i>L. convexa</i>	MT968662	MT968551
W198	<i>Leptonetela tianxingensis</i>	Xianduhe Cave, Chongqing, China	28.51N/106.69E	MT968663	MT968552
W202	Jingneta sp1	Yin Cave, Henan, China	40.76 N/113.70E	MT968664	MT968553
W203	<i>Rhyssoleptoneta</i> sp	Baxian Cave, Henan, China	32.88 N/111.5E	MT968665	MT968554
W204	Leptonetidae gen	Tianxian, Henan, China	32.67N/113.70E		MT968555
W205	Leptonetidae gen	Wuming, Henan, China	32.80N/111.56E	MT968556	MT968607
W214	<i>Falcileptoneta musculina</i>	Otake cave, Tokyo, Japan	35.75N/139.15E	MT968666	MT968557
W216	<i>Falcileptoneta musculina</i>	Narusawa Bat Cave, Yumanashi, Japan	35.47N/138.67E	MT968667	MT968558
W222	<i>Leptonetela encun</i>	Encun Cave, Guangxi, China	25.08N/107.59E	MT968668	MT968559
W254	Falcileptoneta sp2	Fengcheng City, Shenyang, China	40.38N/124.08E	MT968690	MT968560
W256	Longileptoneta sp4	Jiande City, Zhejiang, China	29.47N/119.27E	MT968669	MT968561
W257	<i>Falcileptoneta chiakensis</i>	Mt. Chiak , Socho-myeon, Gangweon-do Korea	37.40N/128.05E	MT968670	MT968562
W258	<i>Falcileptoneta odaesanensis</i>	Mt. Odae, Gangwon-do, Korea,	37.79N/128.57E	MT968671	MT968563
W259	<i>Longileptoneta weolakensis</i>	Weolak, Mt. Hansu-myeon, Jecheon-si,	36.86N/128.10E	MT968672	MT968612
W260	<i>Falcileptoneta. hansanensis</i>	Hansan-myeon,Gyeongnam-do,	34.80N/128.48E	MT968673	MT968564
W261	<i>Falcileptoneta unmunensis</i>	Mt. Unmun, Gyeongsangbuk-do,Korea	35.65N/129.03E	MT968674	MT968565
W262	<i>Falcileptoneta unmunensis</i>	Mt. Unmun, Gyeongsangbuk-do,Korea	35.65N/129.03E	MT968675	MT968615
W263	<i>Masirana. flabelli</i>	Mt Kkachisan, Bangeum-ri, Gyeongsangbuk-do, Korea	35.70N/128.95E	MT968676	MT968566
W264	<i>Falcileptoneta maewhaensis</i>	Maehwasan-ro, Gyeongsangnam-do, Korea,	35.76N/128.12E	MT968677	MT968567
W265	<i>Longileptoneta. gayaensis</i>	Sinpa-ri, Suryun-myeon, Seongju-gun, Gyeongsangbuk-do, Korea	35.82N/128.18E	MT968678	MT968568

W266	<i>Longileptoneta gachangensis</i>	Mt. Choijeong, Daegu, Korea	35.78N/128. 60E	MT968679	MT968569	MT968619	MT987991	MT995814
W268	<i>Falcileptoneta juwangensis</i>	Mt Juwang, Gyeongbuk-do, Korea	36.40N/129. 16E	MT968680	MT968570	MT968620	MT987992	MT995815
W269	<i>Falcileptoneta juwangensis</i>	Mt Juwang, Gyeongbuk-do, Korea	36.40N/129. 16E	MT968681	MT968571	MT968621	MT987993	MT995816
W270	<i>Masirana ihwaeolensis</i>	Gye-ri, Gyeongbuk-do, Korea	36.76N/129. 18E	MT968682	MT968572	MT968622	MT987994	
W271	<i>Falcileptoneta ihwaeolensis</i>	Dang-ri, Gyeongbuk-do, Korea	36.78N/129. 06E	MT968683	MT968573	MT968623	MT987995	MT995817
W272	<i>Masirana bonghwaensis</i>	Mt Taebaek, Hyeol-dong, Taebaek-si, Gangwon-do,	37.04N/128. 99E	MT968684	MT968574	MT968624	MT987996	MT995818
W273	<i>Falcileptoneta boeunensis</i>	Samga-ri, Chungbuk-do, Korea	36.50N/127. 86E	MT968685	MT968575	MT968625	MT987997	MT995819
W274	<i>Longileptoneta songniensis</i>	Sango-ri, Hwabuk-myeon, Sangju-si, Chungbuk-do, --	36.51N/127. 92E			MT968626	MT987998	MT995820
W275	<i>Leptoneta kwangreungensis</i>	Janghyeon-ri, Gyeonggi-do, Korea	37.73 N/ 127.17 E	MT968686	MT968576	MT968627	MT987999	MT995821
W276	<i>Falcileptoneta baegunsanensis</i>	Mt Baegunsan, Gyeonggi-do, Korea, 40E	38.07N/127. 40E	MT968687	MT968577	MT968628	MT988000	MT995822
W277	<i>Falcileptoneta yebongsanensis</i>	Jinjung-ri, Mt Yebong, Gyeonggi-do, Korea,	37.56N/127. 29E	MT968688	MT968578	MT968629	MT988001	MT995823

Genbank

<i>Falcileptoneta coreana</i>	JN816654.1	JN816868.1	JN816437.1	JN817068.1
<i>Falcileptoneta hwanseonensis</i>	JN816656.1	JN816870.1	JN816439.1	JN817069.1
<i>Hickmania</i>	KY016333.	KY016945.	KY015757.	KY017601.
	1	1	1	1
<i>Leptoneta hogyegulensis</i>	JN816655.1	N816869.1	JN816438.1	
<i>Leptoneta infuscata</i>	KY016498.	KY017140.	KY015922.	KY017764.
	1	1	1	1
<i>Leptoneta waheulgulensis</i>	JN816657.1		JN816440.1	

Supplementary Table S2 Primers used for amplification and sequencing in this study

Gene	Primer	Sequence 5'-3'	References
COI	LCO1490-ONO	GGTCAACAAATCATCATAAAGATATTGG	Folmer et al., 1994
	HCO2568	GCTACA ACA TAA TAA GTA TCATG	Hedin et al., 2001
28S	28Sa	GACCCGTCTGAAACACGGA	Rix et al., 2008
	28LSUR	GCTACTACCACCAAGATCTGCA	Rix et al., 2008
	28srd4.8a	ACCTATTCTCAAACTTAAATGG	Schwendinger & Giribet 2005
	28srd7b1	GACTTCCCTTACCTACAT	Schwendinger & Giribet 2005
18S	18SA	CCTACTCTGGTTGATCCTGCCAGT	Englisch et al., 2001
	18S1380R	CTCCGTCAATTCTTTAAG	This study
	18S900F	CGAAGGGCGATYAGATACCG	This study
	18S-1800R	GATCCTCCGCAGGTTCACCTAC	Englisch et al., 2001
H3	H3aF	ATGGCTCGTACCAAGCAGACVGC	Colgan et al., 1998
	H3aR	ATATCCTTRGGCATRATRGTCAC	Colgan et al., 1998
16S	16SA	CGCCTGTTTATCAAAACAT	Amedo et al., 2004
	16SB2R	CTCCGGTTGAACTCAGATCA	Amedo et al., 2004

REFERENCES

- Arnedo MA, Oromi P, Murria C, Macias-Hernandez N, Ribera C. 2007. The dark side of an island radiation: systematics and evolution of troglobitic spiders of the genus *Dysdera* Latreille (Araneae : Dysderidae) in the Canary Islands. *Invertebrate Syst*, **21**(6), 623–660.
- Colgan D, McLachlan A, Wilson GDF, Livingston SP, Edgecombe GD, Macaranas J, Gassis G, Gray MR. 1998. Histone H3 and U2 snRNA DNA sequences and arthropod molecular evolution. *Aust J Zool*, **46**: 419–437.
- Englisch U, Koenemann S. 2001. Preliminary phylogenetic analysis of selected subterranean amphipod crustaceans, using small subunit rDNA gene sequences. *Org Divers Evol*, **11**: 139–145.
- Folmer O, Black M, Hoeh W, Vrijenhoek R. 1994. DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. *Mol Mar Biol Biotechnol*, **3**: 294–299.
- Hedin MC, Maddison WPA. 2001. Combined molecular approach to phylogeny of the jumping spider subfamily Dendryphantinae (Araneae: Salticidae). *Mol Phylogenet Evol*, **18**(3): 386–403.
- Rix MG., Harvey MS, Roberts JD. 2008. Molecular phylogenetics of the spider family Micropholcommatidae (Arachnida : Araneae) using nuclear rRNA genes (18S and 28S). *Mol Phylogenet Evol*, **46**(3): 1031–1048.
- Schwendinger PJ, Giribet G. 2005. The systematics of the south-east Asian genus Fangensis Rambla (Opiliones: Cyphophthalmi: Stylocellidae). *Invertebr Syst*, **19**: 297–323.

Supplementary Table S3 Partitioning scheme and best-fit DNA substitution model for phylogenetic reconstructions

Partition		Model
16S	AIC	GTR+I+G
18S	AIC	K80+I+G
28S	AIC	TrN+I+G
COI 1st	AIC	GTR+I+G
COI 2nd	AIC	GTR+I+G
COI 3rd	AIC	GTR+I+G
H3 1st	AIC	JC+I
H3 2nd	AIC	TVMef+G
H3 3rd	AIC	SYM+G