

附录1 长白山垂直自然带弹尾纲名录

Appendix 1 List of Collembola species along altitudinal gradients in Changbai Mountains

物种 Species	参考资料 References	海拔 Altitude (m)
原蛭目 Poduromorpha Börner, 1913		
球角蛭科 Hypogastruridae Börner, 1906		
泡角蛭属 <i>Ceratophysella</i> Börner, 1932		
刺米氏泡角蛭 <i>Ceratophysella horrida</i> (Yosii, 1960)	孙新, 2021	800
斯卡津斯基氏泡角蛭 <i>Ceratophysella skarzynskii</i> Weiner & Sun, 2019	Weiner et al, 2019	2,000
蔻氏球角蛭属 <i>Cosberella</i> Wray, 1963		
舟状蔻氏球角蛭 <i>Cosberella navicularis</i> (Schött, 1893)	孙新, 2021	1,700
疣蛭科 Neanuridae Börner, 1901		
韩国疣蛭属 <i>Koreanurina</i> Najt & Weiner, 1992		
白韩国疣蛭 <i>Koreanurina alba</i> Wu, Bedos & Deharveng, 2014	Wu et al, 2014	1,742
万氏韩国疣蛭 <i>Koreanurina weinerae</i> Wu, Bedos & Deharveng, 2014	Wu et al, 2014	1,742
棘蛭科 Onychiuridae Börner, 1913		
异棘蛭属 <i>Allonychiurus</i> Yoshii, 1995		
宋氏异棘蛭 <i>Allonychiurus songi</i> Sun & Wu, 2012	孙新, 2021	1,763
双棘蛭属 <i>Bionychiurus</i> Pomorski, 1996		
长白双棘蛭 <i>Bionychiurus changbaiensis</i> Sun & Wu, 2012	Sun & Wu, 2012a	1,763
双型棘蛭属 <i>Dimorphaphorura</i> Bagnall, 1949		
三江双型棘蛭 <i>Dimorphaphorura sanjiangensis</i> Sun & Wu, 2012	孙新, 2021	689
多型棘蛭属 <i>Heteraphorura</i> Bagnall, 1948		
雪域山多型棘蛭 <i>Heteraphorura seolagensis</i> (Lee, 1974)	孙新, 2021	800
同型棘蛭属 <i>Hymenaphorura</i> Bagnall, 1948		
帽儿同型棘蛭 <i>Hymenaphorura maoerensis</i> Sun, 2014	Sun, 2014	479
新北同型棘蛭 <i>Hymenaphorura nearctica</i> Pomorski, 2001	孙新, 2021	834
乌苏里同型棘蛭 <i>Hymenaphorura wusuliensis</i> Sun & Wu, 2011	孙新, 2021	834
李氏棘蛭属 <i>Leeonychiurus</i> Sun & Arbea, 2014		
抚松李氏棘蛭 <i>Leeonychiurus fusongensis</i> Sun & Arbea, 2014	孙新, 2021	479
古林李氏棘蛭 <i>Leeonychiurus gulinensis</i> (Sun & Zhang, 2012)	孙新, 2021	800
微型棘蛭属 <i>Micraphorura</i> Bagnall, 1949		
长白微型棘蛭 <i>Micraphorura changbaiensis</i> Sun & Wu, 2012	Sun & Wu, 2012b	1763
小角棘蛭属 <i>Oligaphorura</i> Bagnall, 1949		
朱氏小角棘蛭 <i>Oligaphorura judithae</i> (Weiner, 1994)	孙新, 2021	689
朝鲜小角棘蛭 <i>Oligaphorura koreana</i> (Weiner, 1994)	孙新, 2021	1763
假山小角棘蛭 <i>Oligaphorura pseudomontana</i> Sun & Wu, 2012	孙新, 2021	689
北极小角棘蛭 <i>Oligaphorura ursi</i> (Fjellberg, 1984)	孙新, 2021	689
原棘蛭属 <i>Protaphorura</i> Absolon, 1901		
长白原棘蛭 <i>Protaphorura changbaiensis</i> Sun, Zhang & Wu, 2013)	Sun et al, 2013	800
蛟河原棘蛭 <i>Protaphorura jiaoheensis</i> Sun & Zhang, 2017	Sun et al, 2017	351
吉林原棘蛭 <i>Protaphorura jilinensis</i> Sun & Zhang, 2017	Sun et al, 2017	1,700
短毛棘蛭属 <i>Psyllaphorura</i> Bagnall, 1948		
饶河短毛棘蛭 <i>Psyllaphorura raoheensis</i> Sun & Wu, 2011	孙新, 2021	800
感棘蛭属 <i>Sensillonychiurus</i> Pomorski & Sveenkova, 2006		
阿穆尔感棘蛭 <i>Sensillonychiurus amuricus</i> Babenko, Chimitova & Stebaeva, 2011	孙新, 2021	1,700
类短感棘蛭 <i>Sensillonychiurus pseudoreducta</i> Sun & Wu, 2012	Sun & Wu, 2012c	1,763
短感棘蛭 <i>Sensillonychiurus reducta</i> Sun & Wu, 2012	Sun & Wu, 2012c	1,763
孤雌感棘蛭 <i>Sensillonychiurus virginis</i> Pomorski & Sveenkova, 2006	孙新, 2021	800
刺棘蛭属 <i>Spinonychiurus</i> Weiner, 1996		
中国刺棘蛭 <i>Spinonychiurus sinensis</i> Sun & Li, 2014	Sun & Li, 2014	689
乌拉蛭属 <i>Uralaphorura</i> Martynova, 1978		
通古斯乌拉蛭 <i>Uralaphorura tunguzica</i> Babenko, 2007	孙新, 2021	1,710
拟裸长角蛭属 <i>Coecobrya</i> Yosii, 1956		
潘氏拟裸长蛭 <i>Coecobrya pani</i> Xu, Yu & Zhang, 2012	孙新, 2021	1,100

物种 Species	参考资料 References	海拔 Altitude (m)
长角蚋目 Entomobryomorpha Börner, 1913		
长角蚋科 Entomobryidae Schött, 1891		
镰蚋属 <i>Drepanura</i> Schött, 1891		
蒙古镰蚋 <i>Drepanura mongolica</i> Yosii, 1949	孙新, 2021	1,710
长角蚋属 <i>Entomobrya</i> Rondani, 1861		
丽长角蚋 <i>Entomobrya pulcherrima</i> Yosii, 1942	孙新, 2021	1,100
西伯利亚长角蚋 <i>Entomobrya sibirica</i> Stach, 1963	孙新, 2021	950
二十长角蚋 <i>Entomobrya vigintiseta</i> Lee & Park, 1984	孙新, 2021	1,100
刺齿蚋属 <i>Homidia</i> Börner, 1906		
横山刺齿蚋 <i>Homidia hjesanica</i> Szeptycki, 1973	孙新, 2021	1,100
韩国刺齿蚋 <i>Homidia koreana</i> Lee & Lee, 1981	孙新, 2021	1,100
金化刺齿蚋 <i>Homidia phjongjangica</i> Szeptycki, 1973	孙新, 2021	1,100
类刺齿蚋 <i>Homidia similis</i> Szeptycki, 1973	Bellinger et al, 1996-2022	950
纵纹刺齿蚋 <i>Homidia socia</i> Denis, 1929	Bellinger et al, 1996-2022	950
花斑刺齿蚋 <i>Homidia speciosa</i> Szeptycki, 1973	Bellinger et al, 1996-2022	950
裸长角蚋属 <i>Sinella</i> Brook, 1882		
曲毛裸长蚋 <i>Sinella curviseta</i> Brook, 1882	Bellinger et al, 1996-2022	950
梅氏裸长蚋 <i>Sinella umesaoi</i> Yosii, 1940	孙新, 2021	950
五角蚋属 <i>Orchesellides</i> Bonet, 1930		
中华五角蚋 <i>Orchesellides sinensis</i> (Denis, 1929)	孙新, 2021	1,100
德蚋属 <i>Desoria</i> Agassiz & Nicolet, 1841		
赵氏德蚋 <i>Desoria choi</i> Lee, 1977	Xie et al, 2022	1,400
等节蚋科 Isotomidae Schäffer, 1896		
符蚋属 <i>Folsomia</i> Willem, 1902		
祖符蚋 <i>Folsomia ancestor</i> Potapov, 2000	孙新, 2021	1,550
二眼符蚋 <i>Folsomia binoculata</i> (Wahlgren, 1899)	孙新, 2021	1,710
无眼符蚋 <i>Folsomia inoculata</i> Stach, 1947	孙新, 2021	1,550
大毛符蚋 <i>Folsomia macrochaetosa</i> Martynova, 1977	孙新, 2021	1,550
八眼符蚋 <i>Folsomia octoculata</i> Handschin, 1925	孙新, 2021	800
古北符蚋 <i>Folsomia palaeartica</i> Potapov, 2000	孙新, 2021	1,400
疏毛符蚋 <i>Folsomia sparsosetosa</i> Potapov & Stebaeva, 1997	孙新, 2021	800
弗氏符蚋 <i>Folsomia vtorovi</i> Martynova, 1971	孙新, 2021	1,400
棘类符蚋 <i>Folsomia onychiurina</i> Denis, 1931	Bellinger et al, 1996-2022	1,250
裔符蚋属 <i>Folsomides</i> Stach, 1922		
小裔符蚋 <i>Folsomides parvulus</i> Stach, 1922	孙新, 2021	800
等蚋属 <i>Isotoma</i> Bourlet, 1839		
羽等蚋 <i>Isotoma pinnata</i> Börner, 1909	Xie et al, 2022	1,700
小等蚋属 <i>Isotomiella</i> Bagnall, 1939		
微小等蚋 <i>Isotomiella minor</i> (Schäffer, 1896)	孙新, 2021	1,250
细等蚋属 <i>Micrisotoma</i> Bellinger, 1952		
白细等蚋 <i>Micrisotoma achromata</i> Bellinger, 1952	孙新, 2021	1,250
原等蚋属 <i>Proisotoma</i> Börner, 1901		
微小原等蚋 <i>Proisotoma minuta</i> (Tullberg, 1871)	孙新, 2021	800
异等蚋属 <i>Heteroisotoma</i> Stach, 1947		
中俄异等蚋 <i>Heteroisotoma sinorossica</i> Ding, Potapov & Sokolova, 2011	孙新, 2021	800
齿等蚋属 <i>Metisotoma</i> Maynard, 1951		
麦克纳马拉氏齿等蚋 <i>Metisotoma macnamarai</i> (Folsom, 1918)	Xie et al, 2020	1,850
大头齿等蚋 <i>Metisotoma grandiceps</i> (Reuter, 1891)	孙新, 2021	1,400
近等蚋属 <i>Parisotoma</i> Bagnall, 1940		
若樱近等蚋 <i>Parisotoma hyonosenensis</i> (Yosii, 1939)	孙新, 2021	800
半刺等蚋属 <i>Semicerura</i> Maynard, 1951		
苔藓刺等蚋 <i>Semicerura bryophila</i> Potapov & Sun, 2020	Potapov et al, 2020	1,750
龙状刺等蚋 <i>Semicerura draconis</i> Potapov & Sun, 2020	Potapov et al, 2020	1000
半刺等蚋属 <i>Semicerura</i> Maynard, 1951		

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哥氏刺等蜱 <i>Semicerura goryshini</i> Martynova, 1969	孙新, 2021	1,100
抱等蜱属 <i>Vertagopus</i> Bagnall, 1939		
拟灰抱等蜱 <i>Vertagopus pseudocinereus</i> Fjellberg, 1975	Bellinger et al, 1996-2022	1,400
亚洲抱等蜱 <i>Vertagopus asiaticus</i> Potapov, 2016	Bellinger et al, 1996-2022	1,400
四刺蜱属 <i>Tetracanthella</i> Schött, 1891		
吴氏四刺蜱 <i>Tetracanthella wui</i> Xie, Potapov & Sun, 2019	Xie et al, 2019	1,700
异齿蜱科 <i>Oncopoduridae</i> Carl & Lebedinsky, 1905		
异齿蜱属 <i>Oncopodura</i> Carl & Lebedinsky		
厚角异齿蜱 <i>Oncopodura crassicornis</i> Shoebbotham, 1911	孙新, 2021	1,400
吉井氏异齿蜱 <i>Oncopodura Yosiana</i> Szeptycki, 1977	孙新, 2021	1,400
鳞蜱科 <i>Tomoceridae</i> Schäffer, 1896		
须颚鳞蜱属 <i>Pogonognathellus</i> Paclt, 1944		
异色须颚蜱 <i>Pogonognathellus heterochros</i> Wang, Yu & Zhang, 2013	Wang et al, 2013	1,100
马氏须颚蜱 <i>Pogonognathellus mai</i> Wang, Yu & Zhang, 2013	Wang et al, 2013	1,100
缺齿鳞蜱属 <i>Tomocerina</i> Yosii, 1955		
洁缺齿蜱 <i>Tomocerina liliputana</i> Yosii, 1967	孙新, 2021	1,100
异型缺齿蜱 <i>Tomocerina varia</i> (Folsom, 1899)	孙新, 2021	1,400
鳞蜱属 <i>Tomocerus</i> Nicolet, 1842		
长白山鳞蜱 <i>Tomocerus changbaishanensis</i> Wang, 1999	Wang, 1999	1,100
尖刺鳞蜱 <i>Tomocerus cuspidatus</i> Börner, 1909	孙新, 2021	1,100
德裕鳞蜱 <i>Tomocerus deogyuensis</i> Lee, 1975	孙新, 2021	1,400
杰氏鳞蜱 <i>Tomocerus jesonicus</i> Yosii, 1940	孙新, 2021	1,100
吉林鳞蜱 <i>Tomocerus jilinensis</i> Ma, 2011	Ma, 2011	1,250
宽膜鳞蜱 <i>Tomocerus laxalamella</i> Lee, 1975	孙新, 2021	1,400
斑点鳞蜱 <i>Tomocerus maculatus</i> Sun, Liang & Huang, 2007	孙新, 2021	1,400
墨鳞蜱 <i>Tomocerus nigrus</i> Sun, Liang & Huang, 2006	孙新, 2021	1,700
斑腹鳞蜱 <i>Tomocerus punctatus</i> Yosii, 1967	孙新, 2021	1,400
吉井氏鳞蜱属 <i>Yoshiicerus</i> Yu, 2021		
木下氏吉井氏鳞蜱 <i>Yoshiicerus kinoshitai</i> Yosii, 1954	Ma, 2011	800
近似吉井氏鳞蜱 <i>Yoshiicerus similis</i> Chen & Ma, 1997	孙新, 2021	800
愈腹蜱目 <i>Symphyleona</i> Börner, 1901		
齿棘圆蜱科 <i>Arrhopalitidae</i> Stach, 1956		
穴齿棘圆蜱属 <i>Pygmarrhopalites</i> Vargovitsh, 2009		
长白山穴齿棘圆蜱 <i>Pygmarrhopalites changbaishanensis</i> (Wu & Zhong, 1997)	Wu & Zhong, 1997	1,400
钩圆蜱科 <i>Bourletiellidae</i> Börner, 1913		
卡氏圆蜱属 <i>Cassagnaudiella</i> Ellis, 1975		
粉被卡氏圆蜱 <i>Cassagnaudiella pruinosus</i> (Tullberg, 1871)	孙新, 2021	1,100
异圆蜱属 <i>Heterosminthurus</i> Stach, 1955		
纵纹异圆蜱 <i>Heterosminthurus novemlineatus</i> (Tullberg, 1871)	孙新, 2021	1,100
羽圆蜱科 <i>Dicyrtomidae</i> Börner, 1906		
乳圆蜱属 <i>Papirioides</i> Folsom, 1924		
苏州乳圆蜱 <i>Papirioides suzhouensis</i> Guo & Chen, 1996	孙新, 2021	1,100
环角圆蜱属 <i>Ptenothrix</i> Börner, 1906		
鸣海环角圆蜱 <i>Ptenothrix narumii</i> Uchida, 1940	孙新, 2021	1,100
黑头环角圆蜱 <i>Ptenothrix saxatilis</i> Yosii & Lee, 1963	Bellinger et al, 1996-2022	1,100
圆蜱科 <i>Sminthuridae</i> Lubbock, 1862		
圆蜱属 <i>Sminthurus</i> Latreille, 1802		
绿圆蜱 <i>Sminthurus viridis</i> (Linnaeus, 1758)	孙新, 2021	1,100

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