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CRICKETS (ORTHOPTERA: GRYLLOIDEA) FROM ZHEJIANG PROVINCE, CHINA

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Summary. A checklist of 58 species from 37 genera, 13 subfamilies and 4 families of crickets recorded from Zhejiang Province of China is given, based on the published data and the material deposited in the Museum, Hebei University, Baoding, China (MHBU). *Pentacentrus transversus* Liu et Shi, 2015 and *Valiatrella sororia sororia* (Gorochov, 2002) are recorded from this province for the first time. The biodiversity of crickets in four provinces of China (Zhejiang, Hebei, Hunan, and Shaanxi) was compared.

Key words: Gryllidae, Phalangopsidae, Mogoplistidae, Trigonidiidae, fauna, new record, China.

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Резюме. Для провинции Чжэцзян приводится аннотированный список 58 видов из 37 родов, 13 подсемейств и 4 семейств сверчковых, составленные на основе литературных данных и коллекций Музея Хэбейского университета. Впервые для этой провинции приводятся *Pentacentrus transversus* Liu et Shi, 2015 и *Valiatrella sororia sororia* (Gorochov, 2002). Сравнивается разнообразие сверчковых китайских провинций Чжецзян, Хэбэй, Хунань и Шэньси.

INTRODUCTION

Zhejiang Province, located on the southeast coast of China, east to the East China Sea, south to Fujian Province, west to Anhui Province and Jiangxi Province, and north to Shanghai and Jiangsu provinces (Fig. 1). Hsu Y.-C. is the first to report on cricket species in Zhejiang Province (Hsu, 1928). Yin Hai-Sheng and Liu Xian-Wei recorded 36 species and 24 genera of Grylloidea in Zhejiang Province (Yin & Liu, 1995). Fang Zhi-Gang & Wu Hong (2001) recorded 33 species and 20 genera in *Checklist of insects from Zhejiang*, the distribution of some species in Zhejiang Province is also listed. Meanwhile, a number of cricket species have been reported successively in some nature reserves in Zhejiang Province, such as Mt. Baishanzu (Chen *et al.*, 1995), Mt. Longwang (Yu & Lu, 1998), Mt. Tianmu (Yin *et al.*, 2001; Liu & Shi, 2014), Mt. Wuyanling (Liu, 2009), Mt. Fengyang (Liu & Bi, 2010), Mt. Qingliangfeng (Liu & Bi, 2014; Liu & Shi, 2014). At the same time, there are some literatures about the crickets species in Zhejiang Province (Li *et al.*, 2010; He *et al.*, 2010; Liu & Shi, 2015a; Liu *et al.*, 2016; Zhang *et al.*, 2017; He *et al.*, 2017; Liu *et al.*, 2018; Lu *et al.*,

2018; Jaiswara *et al.*, 2019; Cigliano *et al.*, 2019), and we inspected some specimens of Zhejiang crickets in the Museum of Hebei University (MHBUE), which enriched the diversity and geographical distribution information of crickets in Zhejiang Province.

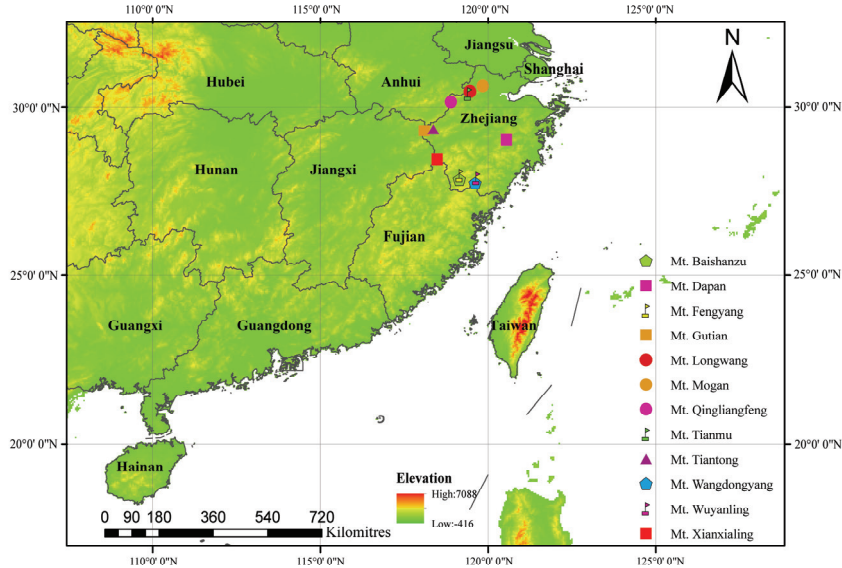


Fig. 1. Map of Zhejiang and adjacent provinces of China with location of twelve mountains in Zhejiang Province.

NEW RECORDS

Pentacentrus transversus Liu et Shi, 2015

MATERIAL. China: Zhejiang, Lin'an, Mt. Tianmu, 14-15.IX 2012, 1♂, leg. Yuan-Yuan Lu.

REMARKS. Here this species is recorded from Zhejiang Province for the first time.

Valiatrella sororia sororia (Gorochov, 2002)

MATERIAL. China: Zhejiang, Lin'an, Mt. Fengyang, 29.VII 2007, 1♂, leg. Hao-Yu Liu; Jingning, Mt. Wangdongyang, 17.VIII 2018, 1♀, leg. Zi-Di Wei & Yi-Jia Xue.

REMARKS. Here this species is recorded from Zhejiang Province for the first time.

RESULTS

In a recently completed research a checklist of Chinese crickets recorded 55 species and 31 genera of Grylloidea in Zhejiang Province (He, 2018). But distribution in Hong Kong and Macao is substituted for Guangdong Province, distribution of Beijing and Tianjin is substituted for Hebei Province, distribution of Shanghai is substituted for Zhejiang Province in this checklist. Therefore, many records in Zhejiang Province are not new records of species in the scientific sense, so this article screens this situation and re-identify them according to the administrative divisions of the People's Republic of China and some literatures (Table 1).

Table 1. A tabular checklist of Grylloidea of Zhejiang Province, China.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
Family Gryllidae		
Subfamily Eneopterinae		
Genus <i>Xenogryllus</i> Bolívar, 1890		
<i>Xenogryllus marmoratus</i> (Haan, 1844)	Mt. Baishanzu, Mt. Longwang, Mt. Tianmu	Shanghai, Anhui, Fujian, Guangxi, Shaanxi, Taiwan; Vietnam; Japan; Korea; Myanmar; India
Subfamily Euscyrinae		
Genus <i>Beybienkoana</i> Gorochoy, 1988		
<i>Beybienkoana formosana</i> (Shiraki, 1930)	Mt. Tianmu	Anhui, Fujian, Hunan, Guangdong, Guangxi, Hainan, Yunnan, Taiwan
Genus <i>Euscyrtes</i> Guérin-Méneville, 1844		
<i>Euscyrtes (Osus) hemelytrus</i> (Haan, 1844)	Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu	Jiangsu, Fujian, Jiangxi, Shandong, Hunan, Guangxi, Hainan, Sichuan, Guizhou, Yunnan; Korea; Japan; Indonesia; Malaysia
Genus <i>Patiscus</i> Stål, 1877		
<i>Patiscus malayanus</i> Chopard, 1969	Mt. Qingliangfeng	Hunan, Guangxi, Guizhou, Yunnan
Subfamily Gryllinae		
Genus <i>Acanthoplistus</i> Saussure, 1877		
<i>Acanthoplistus nigriritibia</i> Zheng et Woo, 1992	District Liandu	None
Genus <i>Comidoblemmus</i> Storozhenko et Paik, 2009		
<i>Comidoblemmus sororius</i> Liu et Shi, 2015	Mt. Tianmu	None
Genus <i>Eumodicogryllus</i> Gorochoy, 1986		
<i>Eumodicogryllus bordigalensis bordigalensis</i> (Latreille, 1804)	Mt. Baishanzu, Mt. Longwang	Hebei, Inner Mongolia, Jiangsu, Fujian, Shandong, Hunan, Guangdong, Guangxi, Sichuan, Yunnan, Xinjiang, Taiwan; Mongolia; Central Asia; North Africa; Western Europe
Genus <i>Goniogryllus</i> Chopard, 1936		
<i>Goniogryllus asperopunctatus</i> Wu et Wang, 1992	Mt. Qingliangfeng, Mt. Tianmu	Hunan, Guangxi, Yunnan

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
<i>Goniogryllus punctatus</i> Chopard, 1936	Mt. Fengyang, Mt. Tianmu	Fujian, Hunan, Guangxi, Sichuan, Guizhou, Yunnan
Genus <i>Grylloides</i> Saussure, 1874		
<i>Grylloides sigillatus</i> (Walker, 1869)	Mt. Baishanzu	Beijing, Liaoning, Heilongjiang, Shanghai, Jiangsu, Anhui, Fujian, Jiangxi, Shandong, Hunan, Guangdong, Guangxi, Hainan, Guizhou, Yunnan, Shaanxi; Japan, Korea, India, Pakistan, Bangladesh, Malaysia; America; Australia; Africa
Genus <i>Gryllus</i> Linnaeus, 1758		
<i>Gryllus (Gryllus) bimaculatus</i> De Geer, 1773	County Kaihua, County Qingyuan, Mt. Fengyangshan	Fujian, Jiangxi, Guangdong, Guangxi, Hainan, Sichuan, Yunnan, Xizang, Taiwan, Hong Kong; Singapore; India; Sri Lanka; Pakistan; Iran; Afghanistan; Europe and parts of Africa
Genus <i>Loxoblemmus</i> Saussure, 1877		
<i>Loxoblemmus aomoriensis</i> Shiraki, 1930	Mt. Mogan, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing	Anhui, Fujian, Henan, Sichuan, Hubei, Hunan, Guangxi, Hainan, Yunnan, Shaanxi; Japan
<i>Loxoblemmus detectus</i> (Serville, 1838)	Mt. Gutian, Mt. Tianmu	Beijing, Jiangsu, Anhui, Fujian, Jiangxi, Guangxi, Sichuan, Guizhou, Shaanxi; Pakistan; Indonesia
<i>Loxoblemmus doenitzi</i> Stein, 1881	Mt. Baishanzu, Mt. Longwang, Mt. Mogan, Mt. Qingliangfeng, Mt. Tianmu	Beijing, Hebei, Shanxi, Liaoning, Shanghai, Jiangsu, Anhui, Jiangxi, Shandong, Henan, Hunan, Guangxi, Sichuan, Guizhou, Shaanxi; Japan; Korea
<i>Loxoblemmus equestris</i> Saussure, 1877	Mt. Baishanzu, Mt. Dapan, Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing, Mt. Baishanzu, Mt. Mogan, Mt. Wangdongyang	Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Anhui, Fujian, Jiangxi, Hubei, Hunan, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Xizang, Shaanxi; Korea; Japan; India; Myanmar; Sri Lanka; Malaysia; Indonesia

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
<i>Loxoblemmus formosanus</i> Shiraki, 1930	Mt. Tianmu	Guangxi, Hainan, Yunnan, Taiwan
Genus <i>Mitius</i> Gorochov, 1985		
<i>Mitius minor</i> (Shiraki, 1911)	Mt. Fengyang	Shanghai, Jiangsu, Taiwan; Korea; Japan
Genus <i>Modicogryllus</i> Chopard, 1961		
<i>Modicogryllus (Modicogryllus) consobrinus</i> (Saussure, 1877)	County Fuyang, District Liandu, County Tongyang	Guangxi, Yunnan, Taiwan; Nepal; Thailand; Philippines
Genus <i>Svercacheta</i> Gorochov, 1993		
<i>Svercacheta siamensis</i> (Chopard, 1961)	Mt. Tianmu	Shanghai, Jiangsu, Anhui, Fujian, Jiangxi, Shandong, Henan, Guangdong, Guangxi, Hainan, Yunnan
Genus <i>Tarbinskiellus</i> Gorochov, 1983		
<i>Tarbinskiellus portentosus</i> (Lichtenstein, 1796)	Mt. Baishanzu, Mt. Longwang, Mt. Wuyanling	Fujian, Jiangxi, Hainan, Yunnan, Xizang, Shaanxi, Qinghai, Taiwan
Genus <i>Teleogryllus</i> Chopard, 1961		
<i>Teleogryllus (Brachyteleogryllus) emma</i> (Ohmachi et Matsumura, 1951)	Mt. Baishanzu, Mt. Dapan, Mt. Fengyang, Mt. Gutian, Mt. Qingliangfeng, Mt. Tianmu, Mt. Tiantong, Mt. Xianxialing	Beijing, Hebei, Shanxi, Shanghai, Jiangsu, Anhui, Fujian, Shandong, Hubei, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Shaanxi, Hong Kong; Korea; Japan;
<i>Teleogryllus (Brachyteleogryllus) occipitalis</i> (Serville, 1838)	Mt. Qingliangfeng, Mt. Tianmu	Hebei, Fujian, Jiangxi, Shandong, Hubei, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Shaanxi; Japan; Myanmar; Vietnam; Thailand; Sri Lanka; Malaysia; Philippines; Indonesia
<i>Teleogryllus (Macroteleogryllus) mitratus</i> (Burmeister, 1838)	Mt. Baishanzu, Mt. Mogan, Mt. Longwang, Mt. Wuyanling	Fujian, Guangdong, Guangxi, Hainan, Yunnan, Taiwan; Myanmar; Vietnam; Thailand; Sri Lanka; Indonesia; India
Genus <i>Velarifictorus</i> Randell, 1964		

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
<i>Velarifictorus (Velarifictorus) aspersus</i> (Walker, 1869)	Mt. Gutian, Mt. Tianmu	Hebei, Jiangsu, Anhui, Fujian, Jiangxi, Henan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Shaanxi; India; Pakistan; Sri Lanka; Thailand; Malaysia
<i>Velarifictorus (Velarifictorus) khasiensis</i> Vasanth et Ghosh, 1975	Mt. Baishanzu	Jiangxi, Fujian, Henan, Hunan, Guangxi, Hainan, Guizhou, Yunnan; India
<i>Velarifictorus (Velarifictorus) micado</i> (Saussure, 1877)	Mt. Dapan, Mt. Fengyang, Mt. Tianmu, Mt. Wuyanling	Beijing, Hebei, Shanxi, Shanghai, Jiangsu, Fujian, Jiangxi, Shandong, Hunan, Guangdong, Guangxi, Sichuan, Guizhou, Xizang, Shaanxi, Taiwan; Japan; Indonesia; India; Sri Lanka
<i>Velarifictorus (Velarifictorus) ornatus</i> (Shiraki, 1911)	Mt. Tianmu, Mt. Wuyanling	Shanghai, Jiangsu, Fujian, Jiangxi, Shandong, Henan, Hubei, Hunan, Sichuan, Guizhou, Yunnan, Taiwan; Korea; Japan
Subfamily Itarinae		
Genus <i>Parapentacentrus</i> Shiraki, 1930		
<i>Parapentacentrus formosanus</i> Shiraki, 1930	Mt. Fengyang	Fujian, Jiangxi, Guangxi, Sichuan, Yunnan; Vietnam; Myanmar
Subfamily Landrevinae		
Genus <i>Duolandrevus</i> Kirby, 1906		
<i>Duolandrevus (Eulandrevus) infuscatus</i> Liu et Bi, 2010	Mt. Fengyang	None
Genus <i>Landreva</i> Walker, 1869		
<i>Landreva clara</i> (Walker, 1869)	Mt. Wuyanling	Anhui, Fujian, Taiwan
Subfamily Oecanthinae		
Genus <i>Oecanthus</i> Serville, 1831		
<i>Oecanthus longicaudus</i> Matsumura, 1904	Mt. Tianmu	Beijing, Hebei, Shanxi, Jilin, Heilongjiang, Fujian, Jiangxi, Hunan, Guangxi, Sichuan, Guizhou, Yunnan, Shaanxi; Korea; Japan; Russia

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
<i>Oecanthus rufescens</i> Serville, 1838	Mt. Dapan, Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing	Beijing, Hebei, Shanghai, Jiangsu, Anhui, Fujian, Hubei, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan; Vietnam; Malaysia; India; Sri Lanka; Australia
<i>Oecanthus similator</i> Ichikawa, 2001	City Hangzhou	Japan
Subfamily Pentacentrinae		
Genus <i>Pentacentrus</i> Saussure, 1878		
<i>Pentacentrus transversus</i> Liu et Shi, 2015	Mt. Tianmu	Guangxi
Subfamily Podoscirtinae		
Genus <i>Truljalia</i> Gorochov, 1985		
<i>Truljalia hibirionis hibirionis</i> (Matsumura, 1917)	Mt. Tianmu, Mt. Wuyanling	Shanghai, Jiangsu, Fujian, Jiangxi, Hunan, Guangxi, Sichuan, Yunnan; Japan; Korea
<i>Truljalia tylacantha</i> Wang et Woo, 1992	Mt. Qingliangfeng, Mt. Tianmu	Anhui, Fujian, Henan, Hubei, Hunan, Guangxi, Sichuan, Guizhou
Genus <i>Valiatrella</i> Gorochov, 2005		
<i>Valiatrella sororia sororia</i> (Gorochov, 2002)	Mt. Fengyang; Mt. Wangdongyang	Guangdong, Guizhou; Vietnam
Genus <i>Zamunda</i> Gorochov, 2007		
<i>Zamunda fuscirostris</i> (Chopard, 1969)	Mt. Qingliangfeng	Fujian; Malaysia
Subfamily Sclerogryllinae		
Genus <i>Sclerogryllus</i> Gorochov, 1985		
<i>Sclerogryllus punctatus</i> (Brunner von Wattenwyl, 1893)	Mt. Qingliangfeng, Mt. Tianmu	Beijing, Shanghai, Jiangsu, Fujian, Shandong, Hunan, Guangxi, Hainan, Sichuan, Guizhou, Taiwan; Japan; India
Family Mogoplistidae		
Subfamily Mogoplistinae		
Genus <i>Ornebius</i> Guérin-Méneville, 1844		
<i>Ornebius formosanus</i> (Shiraki, 1911)	District Liandu	Guangxi, Taiwan
<i>Ornebius kanetataki</i> (Matsumura, 1904)	City Ningbo	Shanghai, Jiangsu, Anhui
<i>Ornebius polycomus</i> He, 2017	County Qingyuan	None
Family Phalangopsidae		
Subfamily Cachoplistinae		

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
Genus <i>Meloimorpha</i> Walker, 1870		
<i>Meloimorpha japonica japonica</i> (Haan, 1844)	Mt. Qingliangfeng	Beijing, Hebei, Shanghai, Jiangsu, Fujian, Shandong, Hunan, Guangxi, Hainan, Sichuan, Guizhou, Taiwan; Japan; India
Family Trigonidiidae		
Subfamily Nemobiinae		
Genus <i>Dianemobius</i> Vickery, 1973		
<i>Dianemobius fascipes fascipes</i> (Walker, 1869)	Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing	Shanghai, Fujian, Jiangxi, Hubei, Guangdong, Hainan, Yunnan, Taiwan; Myanmar; India; Singapore; Sri Lanka; Indonesia
<i>Dianemobius furumagiensis</i> (Ohmachi et Furukawa, 1929)	Mt. Tianmu	Inner Mongolia, Shandong, Guangxi, Sichuan, Taiwan; Russia; Japan; Afghanistan
Genus <i>Polionemobius</i> Gorochov, 1983		
<i>Polionemobius flavoantennalis</i> (Shiraki, 1911)	Mt. Qingliangfeng, Mt. Tianmu	Shanghai, Jiangsu, Jiangxi, Shandong, Guizhou, Taiwan; Japan
<i>Polionemobius taprobanensis</i> (Walker, 1869)	Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing	Beijing, Hebei, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Shanghai, Jiangsu, Fujian, Jiangxi, Shandong, Henan, Hubei, Guangxi, Hainan, Sichuan, Guizhou, Yunnan; India; Pakistan; Sri Lanka; Malaysia; Myanmar; Indonesia; Japan; Maldives; Bangladesh
Genus <i>Pteronemobius</i> Jacobson, 1904		
<i>Pteronemobius (Pteronemobius) nitidus</i> (Bolivar, 1901)	Mt. Fengyang, Mt. Qingliangfeng, Mt. Tianmu, Mt. Xianxialing	Beijing, Hebei, Jiangsu, Fujian, Shandong, Hunan, Guangdong, Guangxi, Sichuan, Yunnan, Ningxia; Russia; Japan
Genus <i>Speonemobius</i> Chopard, 1924		
<i>Speonemobius sinensis</i> Li, He et Liu, 2010	Mt. Qingliangfeng	None

Continue of Table 1.

Taxa	Distribution	
	Zhejiang Province	Other provinces of China and countries
Subfamily Trigonidiinae		
Genus <i>Amusurgus</i> Brunner von Wattenwyl, 1893		
<i>Amusurgus (Amusurgus) fulvus</i> Brunner von Wattenwyl, 1893	Mt. Tiantong	Hainan, Yunnan; Myanmar; Nepal; Sri Lanka
<i>Amusurgus (Paranaxipha) fujianensis</i> Wang, Zheng et Wu, 1999	Mt. Wuyanling	Fujian, Yunnan
Genus <i>Homoeoxipha</i> Saussure, 1874		
<i>Homoeoxipha lycoides</i> (Walker, 1869)	Mt. Wuyanling	Jiangsu, Fujian
<i>Homoeoxipha nigripes</i> Xia et Liu, 1992	Mt. Qingliangfeng, Mt. Tianmu	Hunan, Guangxi, Hainan, Sichuan, Guizhou, Yunnan
Genus <i>Metioche</i> Stål, 1877		
<i>Metioche (Metioche) haani</i> (Saussure, 1878)	Mt. Tianmu	Shanghai, Jiangxi, Hubei, Hunan, Sichuan, Guizhou, Taiwan; Indonesia
Genus <i>Svistella</i> Gorochochov, 1987		
<i>Svistella bifasciata</i> (Shiraki, 1911)	Mt. Tianmu, Mt. Xianxialing	Shanghai, Jiangsu, Anhui, Jiangxi, Hunan, Hainan, Sichuan, Guizhou, Taiwan; Japan; Korea
<i>Svistella rufonotata</i> (Chopard, 1932)	Mt. Tianmu	Anhui, Hunan, Guangdong, Guangxi, Guizhou, Yunnan, Xizang; Indonesia; India; Malaysia; Vietnam
Genus <i>Trigonidium</i> Rambur, 1838		
<i>Trigonidium (Trigonidium) cicindeloides</i> Rambur, 1838	Mt. Baishanzu	Jiangsu, Fujian, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Taiwan; India; Sri Lanka; Vietnam; Southern Europe; Africa; Madagascar
<i>Trigonidium (Paratrigonidium) nitidum</i> (Brunner von Wattenwyl, 1893)	Mt. Wuyanling	Anhui, Fujian

CONCLUSION

Zhejiang Province is rich in cricket diversity. There are 58 species belonging to 37 genera, 13 subfamilies and 4 families. Among them, the family Gryllidae is the most abundant, with 39 species in 26 genera, and the family Phalangopsidae is the least, with only 1 genus and 1 species in 1 subfamily. In the subfamily class, the Gryllinae is the most abundant, with 23 species in 13 genera, and the subfamilies such as Sclerogryllinae and Itarinae are the least, with only 1 species in 1 genus. Nowadays, the known species distribution of crickets in Zhejiang Province is shown in Fig. 1, most of them are located on the mountains at the border of Zhejiang and other three surrounding provinces.

Table 2. Number of genera and species of Grylloidea recorded from four provinces of China.

Taxa	Provinces							
	Zhejiang		Shaanxi		Hebei		Hunan	
	genera	species	genera	species	genera	species	genera	species
Gryllidae	26	39	16	27	5	10	19	33
Eneopterinae	1	1	1	1	0	0	1	1
Euscyrinae	3	3	1	1	0	0	3	3
Gryllinae	13	23	10	20	4	8	8	20
Itarinae	1	1	0	0	0	0	0	0
Landrevinae	2	2	0	0	0	0	0	0
Oecanthinae	1	3	1	1	1	2	1	2
Pentacentrinae	1	1	0	0	0	0	1	1
Podoscirtinae	3	4	2	3	0	0	4	5
Sclerogryllinae	1	1	1	1	0	0	1	1
Mogoplistidae	1	3	0	0	0	0	0	0
Mogoplistinae	1	3	0	0	0	0	0	0
Phalangopsidae	1	1	0	0	1	1	1	1
Cachoplistinae	1	1	0	0	1	1	1	1
Trigonidiidae	9	15	6	7	3	5	7	9
Nemobiinae	4	6	3	4	3	5	3	4
Trigonidiinae	5	9	3	3	0	0	4	5
Total:	37	58	22	34	9	16	27	43

Recently, the research on the fauna diversity of crickets in various provinces of China have been completed in Hebei, Hunan and Shaanxi provinces (Liu *et al.*, 2017; Gu *et al.*, 2018; Yang *et al.*, 2019). We compared the fauna composition of crickets in these four provinces (Table 2), the species of crickets are the most in Zhejiang Province and the least in Hebei Province. The fauna composition of crickets in Hunan Province is most similar with Zhejiang Province. There are 43 species in 27 genera, and 33 species in 19 genera of Gryllidae. There are 34 species in 22 genera of crickets in Shaanxi Province; Gryllidae is the most abundant (16 genera and 27 species).

The latitudes and climates of Zhejiang and Hunan provinces are similar, so the composition of the fauna of crickets is the most similar. Therefore, some humid-loving crickets which mainly distributed in tropical and subtropical areas, such as Itarinae, Landrevinae and Mogoplistinae. Hebei Province and Shaanxi Province have similar latitudes. Hebei Province is located in the Palaearctic region with less biodiversity. Shaanxi Province is located at the junction of Palaearctic and Oriental regions, especially in the south where the climate is warm and humid. Therefore, the composition of the fauna of crickets in Shaanxi Province is richer than that in Hebei Province. With the development of the research, many new species or records are being discovered continuously in these provinces.

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