

Figure 1. Zhonglu Tibetan Fortress Village, Danba County, Sichuan, China. This is rated as one of the most picturesque villages in China.



Collecting tachinid flies (Diptera, Tachinidae) in the Hengduan Mountains of SW China

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The Hengduan Mountains in southwestern China are recognized as one of the world's 36 biodiversity hotspots according to Conservation International (Boufford 2014). These mountains are contiguous with the southeastern edge of the Qinghai-Tibet Plateau, which began forming about 65 million years ago as the Indian tectonic plate drifted northward and collided with the Eurasian plate. The main uplift of the Hengduan Mountains appears to have occurred fairly quickly and recently, mostly between the late Miocene (8–10 mya) and late Pliocene (ca. 3 mya) (Xing & Ree 2017).

The uplift of the Hengduan Mountains region created a spectacular series of seven parallel high mountain ranges separated by six deep valleys with fast-flowing rivers. These ranges and valleys are roughly aligned in a north-to-south orientation with overall elevation decreasing in the same direction. In some places in the north the mountain peaks are over 6000m high and the valleys 3000m deep. As a result of both geography and climate the northern portion of the Hengduan Mountains is generally cold and dry and the southern portion warm and wet. Warm humid air from the Indian Ocean enters China through these river valleys. The combination of high mountains, deep valleys, climatic variation, and rapid evolution (due to “uplift-driven diversification”, Xing & Ree 2017) has resulted in the Hengduan Mountains becoming one of the most biologically diverse temperate forest ecosystems in the world. It is



Figure 2. Hengduan Mountains outlined on a map of northern Yunnan, eastern Tibet and western Sichuan.

famous for its exceptional flora, including Orchidaceae (orchids), Ericaceae (incl. *Rhododendron*) and Gentianaceae. Many of the ornamental plants that are grown today in the gardens of Europe and North America originated in the Hengduan Mountains. It is also home to some of the rarest vertebrates, such as the giant panda, red panda, white-lipped deer, white eared pheasant, and the recently described Skywalker hoolock gibbon. There are 28 ethnic minorities that are native to the Hengduan Mountains region.

The Hengduan Mountains occupy an area of 350,000 to 500,000 kms², depending upon how the area is defined. It includes the northern portion Yunnan, a sliver of eastern Myanmar, the eastern part of Tibet, and about the western two-thirds of Sichuan (Fig. 2 and see map at <http://ngm.nationalgeographic.com/ngm/0204/feature6/map.html>). A particularly important and sensitive area within the Hengduan Mountains is the Three Parallel Rivers of Yunnan Protected Areas, a UNESCO World Heritage site. It is here that three mighty rivers of vital importance to Southeast Asia originate, the Yangtze (Jinshajiang), Mekong (Lancang), and Salween (Nujiang). The Yangtze flows to the East China Sea, the Mekong flows to the South China Sea, and the Salween flows to the Bay of Bengal.

There are many famous natural scenic places in the Hengduan Mountains. For example, Mount Gongga (the highest mountain in Sichuan), Emei Mountain (a mountain in Sichuan that is the type locality of almost two dozen tachinid species) and the Meili Snow Mountains (in Yunnan near the Tibet border) were selected as three of China’s Ten Most Beautiful Mountains by the China National Geography Magazine. The Hutiao Gorge (also known as the Tiger Leaping Gorge) on the Jinsha River, Nujiang River Grand Canyon, Meili Grand Canyon on the Lancang River, and Jinkou Gorge on the Dadu River are recognized as four of China’s Ten Most Beautiful Gorges. The Baima Snow Mountain Azalea Forest in Yunnan is one of China’s Ten Most Beautiful Forests. The Rongchag Jiaju Tibetan Village in western Sichuan is one of China’s Six Most Beautiful Country Towns and Villages.

The Hengduan Mountains ‘hotspot’ is exceptionally rich in Tachinidae, as reflected in the high number of species and endemics recorded from Sichuan and Yunnan compared to all of China (Table 1) (see also O’Hara *et al.* 2009).

Table 1. Tachinid flies of Sichuan and Yunnan, China’s ‘biodiversity hotspot’

	No. of species	% of total	No. of endemics	% land area
Sichuan	419	33.52	138	5
Yunnan	432	34.64	149	4
Sichuan + Yunnan	685	54.91	229	9
China	1253	100	434	100

A large number of tachinid specimens have been collected from these two provinces during expeditions from the Shenyang Normal University since 2006. Last summer, the three authors of this article (Zhang C.-t., Li X.-y. and Master’s student Liang H.-c.) visited the Hengduan Mountains for fly collecting and rented a car there from July 13th to August 20th, 2017. A checklist of the Tachinidae we collected from northwestern Yunnan and western Sichuan is provided below. *Gastrolepta* sp. is a new record of the genus *Gastrolepta* Rondani for China and *Macquartia grisea* (Fallén) is a new record of this species for China.

July 12 We flew from Shenyang to Kunming, Yunnan.

Yunnan

July 13 Kunming to Xiangyun-Binchuan-Heqing, Huangping.

July 13–15 Heqing County, Huangping.

July 16 Heqing, Huangping to Yulong-Shangri-La Valley-Napahai-Balagezong Valley to Deqen, Benzilan (World Nature Heritage).

July 17 Benzilan-Deqen Valley to Baima & Meili Snow Mountains (Figs. 3–6, 10)-Feilai Temple.

July 18 Deqen (Fig. 12), Feilai Temple to Weixi, Tacheng.

July 19 Weixi, Tacheng to Lijiang (World Heritage).

July 20 Lijiang, Yulong Snow Mountains (Botanical Garden) (Fig. 23) to Wenhai, Daju.

July 21 Lijiang, Daju to Jiangbian Village-Baishuitai-Haba Snow Mountains (Figs. 19, 20)-Daju.

July 22 Lijiang, Daju to Stone Town-Mingyin.

July 23 Lijiang, Mingyin-Fengke to Ninglang, Labo-Yongning-Lugu Lake (Fig. 24).

July 24 Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua City.

Sichuan

July 25 Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala (Fig. 22).

Yunnan

July 26 Panzhihua to Yunnan, Yuanmou, Jiangbian village-Kunming.

July 27 Kunming Botanical Garden.

July 28–29 H-C Liang went to Sichuan, Mianyang, Pingwu, Wanglang Nature Reserve by train and bus.

July 28 C-T Zhang and X-Y Li went back to Shenyang by plane for the Zoological Meeting of NE China.

Sichuan

July 30–
Aug. 4 Pingwu, Wanglang (Panda) Nature Reserve, Reserve Station up-Baozigou-down-Baixionggou-Qikeshu, H-C Liang collected fly specimens.

Aug. 5–6 H-C Liang, Wanglang to Chengdu-Yaan. C-T Zhang & X-Y Li came to Chengdu-Yaan.

Aug. 7 Yaan, Qingyi River-Bifeng Valley-Mt. Zhougong to Erlang Mountains (Fig. 13)-Luding, Moxi.

Aug. 8 Luding, Moxi to Hailuogou, Gongga Shan (7556m, World Heritage) (Figs. 17, 18), Ganheba.

Aug. 9 Moxi to Nanmenguan village-Luding-Kangding (Fig. 21).

Aug. 10 Kangding, Laoyulin to Zheduo Mountains (Fig. 28)-Xinduqiao-Tagong-Daofu, Bamei.

Aug. 11 Bamei town to Danba (Figs. 7, 8), Maoni Valley-Danba, Jiaju-Zhonglu Rongchag Tibetan Village.

Aug. 12 Danba, Zhonglu (Fig. 1, 11) and Jiaju Rongchag Tibetan Village-Meiren Valley to Markang (Barkam), Songgang.

Aug. 13 Songgang-Markang-Miyalu to Guergou-Li Xian.

Aug. 14 Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2-Wolong.

Aug. 15 Wenchuan, Wolong (China Panda Protection Center)-Gengda (China Panda Garden)-Hetaoping to Rilong, Xiaojin. A harvest of tachinid specimens collecting.

Aug. 16 Xiaojin, Rilong to Shuangqiao Valley, Siguniang Shan Nature Reserve (Figs. 25, 26), World Heritage.

Aug. 17 Rilong, Xiaojin to Baoxing, Jiajin Mountains-Mahuang (leech) Valley-Fengtongzhai.

Aug. 18 Baoxing, Fengtongzhai (Panda Nature Reserve; pandas are sent from here as gifts to friendly countries) (Figs. 9, 15, 16)-Dengchigou (the first panda sent to Europe was found here by the French priest and naturalist, Armand David (1826–1900))-Muping to Lushan.

Aug. 19 Lushan, Longmen-Taiping-Shuangshi to Yaan City (Fig. 27).

Aug. 20 Yaan, Mt. Mengding to Mingshan, Mount Top Effort, many specimens of *Blepharipa zebina* caught here from the Emperor's Tea Garden.

Aug. 21–22 Yaan to Chengdu by bus and back to Shenyang by plane.



Figures 3–4. Baima Snow Mountains, Yunnan.

Checklist of Tachinidae collected in the Hengduan Mountains in 2017*

Total: 4 subfamilies, 21 tribes, 68 genera, 130 species.

* A few additional specimens from earlier collecting trips are included.

DEXIINAE

3 tribes, 14 genera, 36 species

DEXIINI

6 genera, 22 species; see Zhang *et al.* (2015) for a review of *Billaea* Robineau-Desvoidy, Zhang *et al.* (2010) for a review of *Dexia* Meigen, and Zhang & Shima (2006) and Zhang & Fu (2012) for treatments of *Dinera* Robineau-Desvoidy.

1. *Billaea atkinsoni* (Baranov, 1934)

Specimens examined. Sichuan: 1♂, Barkam (= Markang), Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang.

2. *Billaea brevicauda* Zhang & Shima, 2015

Specimens examined. Sichuan: 1♂, Kangding, Moxi, Nanmenguan village to suburbs, 1920–2161m, 9.viii.2017, C-T Zhang, X-Y Li. Yunnan: 1♂, Lijiang, Daju, Jiangbian village to Baishuitai, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li. 2♂♂, Lijiang, Lugu Lake-Yongsheng to Panzhuhua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

3. *Billaea chinensis* Zhang & Shima, 2015

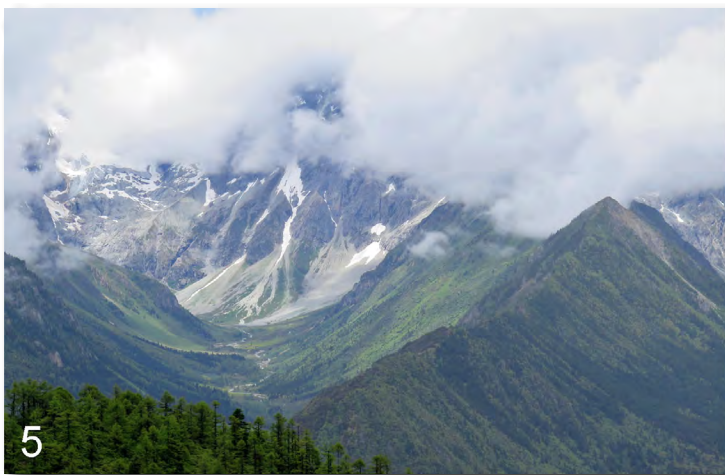
Specimens examined. Sichuan: 1♂, Markang (= Barkam), Songgang to LiXian, 2484m, N31.91°, E102.06°, 13.viii.2017, H.-C. Liang.

4. *Billaea setigera* Zhang & Shima, 2015

Specimens examined. Yunnan: 32♂, Deqen, Baima Snow Mountains to Meili Snow Mountains, 3300–4000m, 17.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

5. *Dexia alticola* Zhang & Shima, 2010

Specimens examined. Sichuan: 5♂, 8♀, Luding, Hailuo Valley, Ganheba, 3032m, N29.57°, E101.99°, 8.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 24♂, 40♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 2♂, 1♀, Barkam, Songgang Town to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li. 3♂, 1♀, Aba Prefecture, Xiaojin, Jiajin village, 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. Yunnan: 4♂, 2♀, Shangri-La, Napahai, 3819m, N28.03°, E99.85°, 16.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Lijiang, Mingyin- Fengke-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, H-C Liang.



Figures 5–6. Baima Snow Mountains, Yunnan.

6. *Dexia caldwelli* Curran, 1927

Specimens examined. Sichuan: 1♂, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang.

7. *Dexia chaoi* Zhang & Shima, 2010

Specimens examined. Sichuan: 4♂, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li. Yunnan: 1♂, Lijiang, Mingyin- Fengke-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, H-C Liang. 4♀, Lijiang, Lugu Lake-Yongsheng to Panzhihua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li.

8. *Dexia monticola* (Malloch, 1935)

Specimens examined. Sichuan: 2♂, Baoxing, Dengchigou to Lushan, 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang, X-Y Li.

9. *Dexia tenuiforceps* Zhang & Shima, 2010

Specimens examined. Sichuan: 1♀, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, H-C Liang. Yunnan: 1♂, 2♀, Lijiang, Lugu Lake-Yongsheng to Panzhihua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

10. *Dexia ventralis* Aldrich, 1925

Specimens examined. Sichuan: 2♂, Baoxing, Dengchigou to Lushan, 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang. 1♀, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, H-C Liang. Yunnan: 1♀, Lijiang, Lugu Lake-Yongsheng to Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

11. *Dinera alticola* Zhang & Shima, 2006

Specimens examined. Sichuan: 2♀, Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang.

12. *Dinera angustifrons* Zhang & Shima, 2006

Specimens examined. Sichuan: 1♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, H-C Liang. 1♀, Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. 1♀, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 10♂, 9♀, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 19♂, 13♀, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, 1♀, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, X-Y Li, H-C Liang. Yunnan: 1♂, Shangri-La, Napahai, 3819m, N28.03°, E99.85°, 16.vii.2017, C-T Zhang. 1♀, Lijiang, Daju-Jiangbian village-Baishuitai, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang.

13. *Dinera fuscata* Zhang & Shima, 2006

Specimens examined. Sichuan: 1♂, 1♀, Mianyang, Pingwu, Wanglang, E. Baixiongou, 2730–2941m, N33.00°, E104.03°, 3.viii.2017, H-C Liang. 2♂, Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. 2♂, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 5♂, 1♀,



Figures 7–8. Bamei to Danba, Sichuan.

Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 3♂, Li Xian, Guqiangpuxi to Wenchuan, Qianzhu Tunnel 2-Wolong, 1800–2256m, 14.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 2♂, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang. 2♂, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li. Yunnan: 3♂, Shangri-La, Napahai, 3819m, N28.03°, E99.85°, 16.vii.2017, C-T Zhang, X-Y Li.

14. *Dinera miranda* (Mesnil, 1963)

Specimens examined. Sichuan: 1♀, Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang.

15. *Dinera setifacies* Zhang & Shima, 2006

Specimens examined. Sichuan: 2♂♂, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang. Yunnan: 1♂, Shangri-La, Napahai, 3819m, N28.03°, E99.85°, 16.vii.2017, H-C Liang. 1♂, Lijiang, Daju, Jiangbian village to Baishuitai, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang. 2♂, 3♀, Lijiang, Lugu Lake-Yongsheng to Panzhuhua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

16. *Dinera takanoi* (Mesnil, 1957)

Specimens examined. Sichuan: 2♂, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 1♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang.

17. *Estheria magna* (Baranov, 1935)

Specimens examined. Sichuan: 1♂, Kangding, Moxi, Nanmenguan village to suburbs, 1920–2161m, 9.viii.2017, H-C Liang. 6♂, 13♀, Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang.

18. *Estheria* sp. 1

Specimens examined. Sichuan: 1♂, 1♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang, X-Y Li. Yunnan: 2♂, Lijiang, Mingyin- Fengke-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, C-T Zhang, H-C Liang.

19. *Estheria* sp. 2

Specimens examined. Sichuan: 2♂, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang, X-Y Li. 2♂, Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang, X-Y Li. 1♀, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang.

20. *Estheria* sp. 3

Specimens examined. Sichuan: 1♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang.



Figures 9–10. 9. Fengtongzhai Nature Reserve, Baoxing County, Sichuan. 10. Border between Yunnan and Tibet, with Chuntian Zhang on left, Dongsheng Li (driver) in middle, and Houcan Liang on right.

21. *Prosenia siberita* (Fabricius, 1775)

Specimens examined. Sichuan: 1♀, Kangding, Moxi, Nanmenguan village to suburbs, 1920–2161m, 9.viii.2017, C-T Zhang. Yunnan: 2♀, Lijiang, Lugu Lake-Yongsheng to Panzhihua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

22. *Trixa pellucens* (Mesnil, 1967)

Specimens examined. Sichuan: 3♂, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li.

RUTILIINI

1 genus, 1 species

23. *Rutilia* sp.

Specimens examined. Sichuan: 1♀, Baoxing, Dengchigou to Lushan, 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang.

VORIINI

7 genera, 13 species

24. *Dexiomimops brevipes* Shima, 1987

Specimens examined. Sichuan: 1♂, Li Xian, Guqiangpuxi to Wenchuan, Qianzhu tunnel 2-Wolong, 1800–2256m, 14.viii.2017, H-C Liang.

25. *Dexiomimops curtipes* Shima, 1987

Specimens examined. Sichuan: 1♀, Baoxing, Dengchigou to Lushan, 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang.

26. *Dexiomimops rufipes* Baranov, 1935

Specimens examined. Sichuan: 1♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang. 5♂, 1♀, Li Xian, Guqiangpuxi to Wenchuan, Qianzhu tunnel 2-Wolong, 1800–2256m, 14.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 2♂, Aba Prefecture, Xiaojin, Jiajin Shan, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li, H-C Liang. Yunnan: 3♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Lijiang, Daju-Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Lugu Lake-Yongsheng to Panzhihua, Sichuan, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

27. *Leptothelaira longipennis* Zhang, Wang & Liu, 2006

Specimens examined. Sichuan: 1♀, Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. 2♂, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang, X-Y Li. 1♂, Li Xian,



Figures 11–12. 11. Danba, Sichuan. 12. Deqen, Balagezong dry and hot valley, Yunnan.

Guqiangpuxi to Wenchuan, Qianzhu tunnel 2-Wolong, 1800–2256m, 14.viii.2017, C-T Zhang. 1♀, Wolong-Gengda-Hetaoping to Rilong, Xiaojin, 1826m, N31.07°, E103.22°, 15.viii.2017, H-C Liang. Yunnan: 1♂, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, H-C Liang. 7♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 16♂, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 6♂, Lijiang, Daju to Baishuitai-Haba Snow Mountains, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 12♂, Lijiang, Daju-Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 3♂, Lijiang, Mingyin-Fengke-Ningliang, Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

28. *Peteina hyperdiscalis* Aldrich, 1926

Specimens examined. Sichuan: 1♀, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang.

29. *Phyllomya annularis* (Villeneuve, 1937)

Specimens examined. Sichuan: 5♂, 23♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Danba, Maoniu Valley-Danba, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. 2♀, Gengda (Chinese Panda Garden)-Hetaoping 1826m, N31.07°, E103.22°, 15.viii.2017, H-C Liang. 1♂, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, C-T Zhang. Yunnan: 2♀, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, H-C Liang. 1♀, Lijiang, Daju-Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang.

30. *Phyllomya gymnops* (Villeneuve, 1937)

Specimens examined. Sichuan: 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang. 1♂, Bamei town to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. Yunnan: 15♂, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 2♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Lijiang, Yulong Snow Mountains to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, H-C Liang. 2♀, Lijiang, Daju-Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang, H-C Liang. 2♀, Lijiang, Mingyin-Fengke-Ningliang, Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, C-T Zhang, H-C Liang.

31. *Stomina tachinoides* (Fallén, 1817)

Specimens examined. Sichuan: 1♂, Danba, Meiren Valley to Markang, Songgang, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang.



Figures 13–14. 13. Erlang Mountains and Dadu River, Sichuan. 14. Some of the tachinine tachinids collected in the Hengduan Mountains.

32. *Thelairia macropus* (Wiedemann, 1830)

Specimens examined. Sichuan: 3♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li, H-C Liang. Yunnan: 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 2♂, 1♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

33. *Thelairia nigripes* (Fabricius, 1794)

Specimens examined. Sichuan: 21♂, 27♀, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang. 1♀, Bamei to Danba, Maoni Valley, 2800m, 11.viii.2017, H-C Liang. 2♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, C-T Zhang, H-C Liang. 1♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang. Yunnan: 3♀, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang, X-Y Li. 2♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, H-C Liang. 9♂, 4♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, 2♀, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang, X-Y Li. 5♂, 5♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 9♂, 7♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang, X-Y Li, H-C Liang. C-T Zhang, X-Y Li, H-C Liang. 2♂, 1♀, Lijiang, Mingyin-Fengke to Ninglang, Labo-Yongning-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 8♂, 1♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

34. *Thelairia occellaris* Chao & Shi, 1985

Specimens examined. Sichuan: 5♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li. Yunnan: 2♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, H-C Liang. 6♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

35. *Thelairia solivaga* (Harris, 1780)

Specimens examined. Sichuan: 7♀, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li. 2♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang, X-Y Li. 2♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang. 2♀, Rilong, Xiaojin to Baoxing, Jiajin Mountains-



Figures 15–16. 15. Fengtongzhai Nature Reserve, Baoxing County, Sichuan. 16. Giant panda exhibit in museum at Fengtongzhai Nature Reserve.

Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, H-C Liang. 3♀, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, X-Y Li, H-C Liang. Yunnan: 2♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, H-C Liang. 2♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li. 4♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Panzihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

36. *Voria ruralis* (Fallén, 1810)

Specimens examined. Sichuan: 1♀, Luding, Hailuo Valley, Gongga Shan, 3032m, N29.57°, E101.99°, 8.viii.2017, H-C Liang. 2♂, 2♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 3♂, Bamei to Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang, X-Y Li. 1♀, Xiaojin to Baoxing, Jiabin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. Yunnan: 1♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, H-C Liang. 1♂, 2♀, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Mingyin-Fengke to Ninglang, Labo-Yongning-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, H-C Liang. 2♀♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

EXORISTINAE

5 tribes, 29 genera, 42 species

BLONDELIINI

4 genera, 4 species

37. *Admontia podomyia* Brauer & Bergenstamm, 1889

Specimens examined. Sichuan: 1♀, Wanglang, W Reserve Station, 2722–2750m, N32.98°, E104.08°, 31.vii.2017, H-C Liang.

38. *Blondelia nigripes* (Fallén, 1810)

Specimens examined. Sichuan: 3♂, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang.

39. *Gastrolepta* sp., newly recorded genus for China

Specimens examined. Yunnan: 3♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang.



Figures 17–18. 17. Vicinity of Mount Gongga, Sichuan. 18. Gongga Glacier, Sichuan.

40. *Vibrissina turrita* (Meigen, 1824)

Specimens examined. Yunnan: 1♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, H-C Liang.

ERYCINI

12 genera, 20 species

41. *Aplomya confinis* (Fallén, 1820)

Specimens examined. Yunnan: 1♀, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang. 1♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang.

42. *Carcelia* sp. 1

Specimens examined. Sichuan: 1♀, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang. 1♀, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang. 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang. 2♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang. Yunnan: 3♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 1♀, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang, 2♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang.

43. *Carcelia* sp. 2

Specimens examined. Sichuan: 2♂, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang. 1♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang. Yunnan: 6♂, 37♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 5♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang.

44. *Carcelia* sp. 3

Specimens examined. Sichuan: 1♂, Wolong-Gengda-Hetaoping to Rilong, Xiaojin, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. Yunnan: 1♂, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang. 1♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang.

45. *Drino atropivora* (Robineau-Desvoidy, 1830)

Specimens examined. Yunnan: 1♂, Kunming, Mt. Xishan, 1950–2350m, 27.vii.2010, C-T Zhang.



Figures 19–20. Haba Snow Mountains, Yunnan.

46. *Drino* sp. 1

Specimens examined. Yunnan: 1 ♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang. 1 ♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, X-Y Li. 1 ♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang. 3 ♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

47. *Drino* sp. 2

Specimens examined. 1 ♂, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. 1 ♂, Xiaojin to Baoxing, Jiabin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. Yunnan: 1 ♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 1 ♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, X-Y Li. 1 ♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang.

48. *Drino* sp. 3

Specimens examined. Yunnan: 1 ♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, X-Y Li. 1 ♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, H-C Liang.

49. *Drino* sp. 4

Specimens examined. Sichuan: 1 ♀, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang. 1 ♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang. Yunnan: 1 ♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang.

50. *Epicamnocera succincta* (Meigen, 1824)

Specimens examined. Sichuan: 1 ♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, C-T Zhang.

51. *Gymnophryxe modesta* Herting, 1973

Specimens examined. Yunnan: 1 ♀, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, C-T Zhang.

52. *Nilea* sp.

Specimens examined. Sichuan: 1 ♂, 1 ♀, Luding, Hailuo Valley, Gongga Shan, 3032m, N29.57°, E101.99°, 8.viii.2017, C-T Zhang.

53. *Phebellia* sp.

Specimens examined. Sichuan: 1 ♂, Luding, Hailuo Valley, Gongga Shan, 3032m, N29.57°, E101.99°, 8.viii.2017, X-Y Li.



Figures 21–22. 21. Kangding, Sichuan. 22. Panzhihua to Yanbian, Gesala, Sichuan.

54. *Phryxe nemea* (Meigen, 1824)

Specimens examined. Sichuan: 1♀, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang. 1♀, Bamei to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang. 1♂, Xiaojin to Baoxing, Jiajin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang.

55. *Phryxe vulgaris* (Fallén, 1810)

Specimens examined. Sichuan: 1♂, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, C-T Zhang. 1♀, Xiaojin to Baoxing, Jiajin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. Yunnan: 2♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang. 1♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang.

56. *Senometopia* sp. 1

Specimens examined. Sichuan: 2♂, 1♀, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li. 1♂, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang. 2♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li. Yunnan: 1♀, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang, X-Y Li. 5♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang. 2♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, H-C Liang.

57. *Senometopia* sp. 2

Specimens examined. Sichuan: 1♂, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang. 1♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang. 2♂, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang, X-Y Li. Yunnan: 1♂, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang, X-Y Li. 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang.

58. *Sisyropa* sp.

Specimens examined. Yunnan: 1♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang.

59. *Sturmiopsis* sp.

Specimens examined. Yunnan: 1♀, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang.



Figures 23–24. 23. Yulong Snow Mountain, Lijiang High Mountain Botanical Garden, Yunnan. 24. Lugu Lake, Yunnan.

60. *Weingaertneriella* sp.

Specimens examined. Sichuan: 1♀, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang. Yunnan: 1♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang.

ETHILLINI

1 genus, 1 species

61. *Phorocerosoma vicarium* (Walker, 1856)

Specimens examined. Sichuan: 1♂, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, C-T Zhang. Yunnan: 1♂, 1♀, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang.

GONINI

8 genera, 14 species

62. *Blepharella lateralis* Macquart, 1851

Specimens examined. Yunnan: 1♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, H-C Liang.

63. *Blepharipa latigena* (Mesnil, 1970)

Specimens examined. Sichuan: 1♂, Panzhuhua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village- Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang. 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, X-Y Li. Yunnan: 5♂, Deqen, Yunling Mountains, 2600–2900m, 27–31.v.2012, Q. Wang.

64. *Blepharipa sugens* (Wiedemann, 1830)

Specimens examined. Sichuan: 1♂, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, X-Y Li. 1♂, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang. 1♂, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, X-Y Li. 3♂, Yaan, Mt. Mengding to Mingshan, 1300–1420m, N30.09°, E103.05°, 20.viii.2017, C-T Zhang, X-Y Li. 4♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li.

65. *Blepharipa zebina* (Walker, 1849)

Specimens examined. Sichuan: 1♀, Leshan, Emei Mountains, 1200–2500m, 20.viii.2013, C-T Zhang, X-Y Li. 1♂, 2♀, Panzhuhua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village- Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li. 3♂, 1♀, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang, X-Y Li. 5♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m,



Figures 25–26. Siguniang Shan Nature Reserve, Sichuan.

9.viii.2017, C-T Zhang, X-Y Li. 2♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, C-T Zhang, X-Y Li. 6♂, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang, X-Y Li. 2♂, Lushan, Longmen-Taiping-Shuangshi to Yaan City, 18.viii.2017, C-T Zhang, X-Y Li. 52♂, 1♀, Yaan, Mt. Mengding to Mingshan, 800–1420m, N30.09°, E103.05°, 20.viii.2017, C-T Zhang, X-Y Li, H-C Liang. Yunnan: Yunnan: 1♂, Deqen, Yunling Mountains, 2900m, 1–2. vi.2012, Q. Wang. 2♂, 1♀, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li. 1♂, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang, X-Y Li. 12♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li. 1♂, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang.

66. *Eumea linearicornis* (Zetterstedt, 1844)

Specimens examined. Sichuan: 1♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang. 1♂, 1♀, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. 1♀, Bamei to Danba, Maoni Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang. 5♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 1♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, X-Y Li.

67. *Gonia* sp.

Specimens examined. Sichuan: 1♂, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang.

68. *Pales abdita* Cerretti, 2005

Specimens examined. Sichuan: 1♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang.

69. *Pales carbonata* Mesnil, 1970

Specimens examined. Sichuan: 1♀, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, H-C Liang. 2♀, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. 1♂, Xiaojin to Baoxing, Jiabin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. 1♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang. Yunnan: 1♂, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang. 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang. 1♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

70. *Pales murina* Mesnil, 1970

Specimens examined. Sichuan: 5♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li.



Figures 27–28. 27. Lushan to Longmen to Taiping to Yaan, Sichuan. 28. Zheduo Mountains, Kangding, Sichuan; Xinyi Li is collecting on the upper left and Houcan Liang on the right.

71. *Pales pavid* (Meigen, 1824)

Specimens examined. Sichuan, Pingwu, Wanglang: 1♀, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, H-C Liang. 1♀, E Reserve Station, 2666–2752m, 2.viii.2017, H-C Liang. 1♂, E Baozigou, 2697–2655m, N32.91°, E104.16°, 1.viii.2017, H-C Liang. 1♀, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang. 3♀, Xiaojin to Baoxing, Jiain Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li. 1♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang. Yunnan: 2♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li. 1♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang.

72. *Pales* sp.

Specimens examined. Sichuan: 3♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li.

73. *Pexopsis* sp.

Specimens examined. Yunnan: 1♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

74. *Pseudogonia rufifrons* (Wiedemann, 1830)

Specimens examined. Yunnan: 1♂, Lijiang, Shigu town, 1800m, 20.viii.2010, C-T Zhang.

75. *Zenillia libatrix* (Panzer, 1798)

Specimens examined. Sichuan: 1♀, Yaan, Qingyi River-Mt. Zhougong, 998m, N29.97°, E103.3°, 7.viii.2017, C-T Zhang. ?2♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala. Tibet: 1♂, Ricaze, Yadong, 2900–3000m, 19–21.vii.2014, Q. Wang.

WINTHEMIINI

2 genera, 3 species

76. *Smidtia* sp.

Specimens examined. Sichuan: 2♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang. 1♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, X-Y Li.

77. *Winthemia venusta* (Meigen, 1824)

Specimens examined. Sichuan: 1♂, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang, X-Y Li. 5♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li. 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang.

20♂, Wolong-Gengda-Hetaoping to Rilong, Xiaojin, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang, X-Y Li. 1♀, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017, H-C Liang. 1♂, Xiaojin to Baoxing, Jiabin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang. 2♀, Rilong, Xiaojin to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, H-C Liang. 2♂, 1♀, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, X-Y Li, H-C Liang.

78. *Winthemia* sp.

Specimens examined. Sichuan: 2♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, C-T Zhang, X-Y Li.

PHASIINAE

6 tribes, 10 genera, 16 species

CYLINDROMYIINI

4 genera, 6 species

79. *Besseria* sp.

Specimens examined. Sichuan: 1♂, Pingwu, Wanglang, E Baozigou, 2697–2655m, N32.91°, E104.16°, 1.viii.2017, H-C Liang.

80. *Cylindromyia luciflua* (Villeneuve, 1944)

Specimens examined. Sichuan: 1♂, 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang. 1♂, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang.

81. *Cylindromyia (Malayocyptera) umbripennis* (van der Wulp, 1881)

Specimens examined. Sichuan: 1♂, Yaan, Qingyi River-Bifeng Valley-Mt. Zhougong to Erlang Mountains- Luding, Moxi, 7.viii.2017, H-C Liang. 1♀, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang. 1♀, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, H-C Liang.

82. *Cylindromyia* sp.

Specimens examined. Sichuan: 1♀, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, H-C Liang.

83. *Hemyda deqinensis* Wang, Zhang & Wang, 2015

Specimens examined. Yunnan: 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang.

84. *Lophosia excisa* Tothill, 1918

Specimens examined. Yunnan: 2♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, H-C Liang.

GYMNOSOMATINI

1 genus, 3 species

85. *Gymnosoma rotundatum* (Linnaeus, 1758)

Specimens examined. Yunnan: 1♂, 1♀, Shangri-La, Napahai, 3819m, N28.03°, E99.85°, 16.vii.2017, C-T Zhang.

86. *Gymnosoma sylvaticum* Zimin, 1966

Specimens examined. Sichuan: 4♂, 2♀, Yaan, Qingyi River-Bifeng Valley-Mt. Zhougong to Erlang Mountains- Luding, Moxi, 7.viii.2017, H-C Liang. 1♀, Xiaojin to Baoxing, Jiabin Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang.

87. *Gymnosoma* sp.

Specimens examined. Sichuan: 2♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 1339–2070m, N26.79°, E101.06°, 25.vii.2017, C-T Zhang, X-Y Li. 1♂, 1♀, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang, X-Y Li. 1♂, 1♀, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, X-Y Li.

HERMYINI

1 genus, 1 species.

88. *Hermya beelzebul* (Wiedemann, 1830)

Specimens examined. Sichuan: 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang. 1♀, Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. H-C Liang. 3♂, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang, X-Y Li. 1♀, Li Xian, Guqiangpuxi to Wenchuan, Qianzhu tunnel 2-Wolong, 1800–2256m, 14.viii.2017, C-T Zhang. 1♂, 3♀, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, X-Y Li. 1♀, Lushan-Longmen-Taiping-Shuangshi, 800–1328m, N30.29°, E102.96°, 19.viii.2017, C-T Zhang. Yunnan: 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, H-C Liang. 3♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 3♂, Weixi, Tacheng to Lijiang, 1924–2700m, N27.34°, E99.66°, 19.vii.2017, C-T Zhang, X-Y Li.

LEUCOSTOMATINI

1 genus, 2 species

89. *Calyptromyia barbata* Villeneuve, 1915

Specimens examined. Yunnan: 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, H-C Liang.

90. *Calyptromyia* sp.

Specimens examined. Sichuan: 2♂, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 1♂, Li Xian, Guqiangpuxi to Wenchuan, Qianzhu tunnel 2-Wolong, 1800–2256m, 14.viii.2017, C-T Zhang. 6♂, 1♀, Xiaojin to Baoxing, Jiain Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang.

PHASIINI

2 genera, 3 species

91. *Ectophasia crassipennis* (Fabricius, 1794)

Specimens examined. Sichuan: 1♂, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, H-C Liang. Yunnan: 1♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang.

92. *Ectophasia rotundiventris* (Loew, 1858)

Specimens examined. Sichuan: 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang. 1♀, Danba, Meiren Valley, Waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 2♂, 1♀, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang, X-Y Li, H-C Liang.

93. *Phasia* sp.

Specimens examined. Sichuan: 1♂, Kangding, Laoyushu village to Zheduo Mountains, 3132–3231m, N29.94°, E101.96°, 10.viii.2017, H-C Liang.

STRONGYGASTRINI

1 genus, 1 species

94. *Melastrongygaster chaoi* Shima, 2015

Specimens examined. Sichuan: 1♂, Markang, Songgang to Li Xian, 2484m, N31.91°, E102.06°, 13.viii.2017, C-T Zhang. 7♂, Xiaojin to Baoxing, Jiain Mountains-Fengtongzhai 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang.

TACHININAE (Fig. 14)

7 tribes, 15 genera, 36 species

ERNESTIINI

5 genera, 13 species

95. *Chrysosomopsis euholoptica* (Chao & Zhou, 1989)

Specimens examined. Sichuan: 1♂, Pingwu, Wanglang, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017, H-C Liang.

96. *Chrysosomopsis stricta* (Aldrich, 1926)

Specimens examined. Sichuan: 3♂, Pingwu, Wanglang, E Baozigou, 2697–2655m, N32.91°, E104.16°, 1.viii.2017, H-C Liang.

97. *Gymnocheta* sp.

Specimens examined. Sichuan: 1♂, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, H-C Liang.

98. *Hyalurgus sima* (Zimin, 1960)

Specimens examined. Sichuan, Pingwu, Wanglang: 2♀, W Reserve Station, 2722–2750m, N32.98°, E104.08°, 31.vii.2017; 2♀, E Baozigou, 2697–2655m, N32.91°, E104.16°, 1.viii.2017; 1♀, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, all by H-C Liang.

99. *Linnaemya (Linnaemya) ruficornis* Chao, 1962

Specimens examined. Sichuan: 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017; Yunnan: 1♀, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, all by H-C Liang.

100. *Linnaemya (Ophina) microchaetopsis* Shima, 1986

Specimens examined. Sichuan: 1♂, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang.

101. *Linnaemya (Ophina) picta* (Meigen, 1824)

Specimens examined. Sichuan, Pingwu, Wanglang: 2♀, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017; 1♀, W Reserve Station, 2722–2750m, N32.98°, E104.08°, 31.vii.2017; 1♀, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, all by H-C Liang.

102. *Linnaemya (Ophina) rossica* Zimin, 1954

Specimens examined. Sichuan: 1♂, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017; 1♂, Bamei to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017; 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017 all by H-C Liang.

103. *Panzeria anthophila* (Robineau-Desvoidy, 1830)

Specimens examined. Sichuan: 1♀, Bamei to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, H-C Liang. 1♂, Songgang- Markang-Miyalu to Guergou-Li Xian, 13.viii.2017, H-C Liang. 1♂, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, X-Y Li. 1♀, Xiaojin, Rilong to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang. Yunnan: 2♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

104. *Panzeria connivens* (Zetterstedt, 1844)

Specimens examined. Sichuan: 1♀, Aba Prefecture, Xiaojin, Shuangqiao Valley, Siguniang Shan, 2850–3700m, 16.viii.2017; 1♀, Xiaojin, Rilong to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017; 1♀, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, all by H-C Liang.

105. *Panzeria nemorum* (Meigen, 1824)

Specimens examined. Sichuan: 1♂, Pingwu, Wanglang, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017, H-C Liang.

106. *Panzeria tuberculata* (Chao & Shi, 1981)

Specimens examined. Sichuan, Pingwu, Wanglang: 2♂, E Reserve Station, 2666–2752m, 2.viii.2017; 2♂, Baixiongou, 2730–2941m, N33.00°, E104.03°, 3.viii.2017; 1♀, Pingwu, Wanglang, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, all by H-C Liang. Yunnan: 3♂, 1♀, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, H-C Liang.

107. *Panzeria (Fausta) sp.*

Specimens examined. Sichuan: 1♀, Yaan, Qingyi River-Mt. Zhougong, 550–800m, N29.97°, E103.03°, 7.viii.2017, H-C Liang.

LESKIINI

1 genus, 1 species

108. *Atylostoma towadensis* (Matsumura, 1915)

Specimens examined. Sichuan: 1♂, 2♀, Baoxing, Fengtongzhai-Dengchigou-Muping to Lushan 1539m, N30.54°, E102.94°, 18.viii.2017, C-T Zhang, X-Y Li, H-C Liang. Yunnan: 1♂, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang. 1♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang.

MACQUARTIINI

1 genus, 1 species

109. *Macquartia grisea* (Fallén, 1810), newly recorded species for China

Specimens examined. Sichuan: 1♂, Bamei to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang.

MEGAPROSOPINI

1 genus, 1 species; see Zhang & Liu (2006) for a review of *Dexiosoma Rondani*.

110. *Dexiosoma nigricorne* Zhang & Liu, 2006

Specimens examined. Sichuan: 1♂, Pingwu, Baixiongou, 2730–2941m, N33.00°, E104.03°, 3.viii.2017, H-C Liang. 10♂, 11♀, Bamei to Danba, Maoniu Valley, 2888m, N30.61°, E101.69°, 11.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, H-C Liang. 2♀, Rilong, Xiaojin to Baoxing, Jiajin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, H-C Liang. 1♀, Lushan, Longmen-Taiping-Shuangshi to Yaan City, 19.viii.2017, C-T Zhang. Yunnan: 1♀, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang, X-Y Li. 1♀, Lijiang, Daju to Stone Town-Mingyin, 2351–2659m, N27.27°, E100.23°, 22.vii.2017, C-T Zhang. 8♂, 1♀, Lijiang, Mingyin-Fengke to Ninglang, Labo-Yongning-Lugu Lake, 2751–3359m, N27.57°, E100.37°, 23.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

MINTHOINI

1 genus, 1 species

111. *Dolichopodomintho dolichopiformis* Townsend, 1927

Specimens examined. Yunnan: 4♂, Heqing, Huangping, 1955m, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang, H-C Liang.

NEMORAEINI

1 genus, 4 species

112. *Nemoraea bifurca* (Chao & Shi, 1982)

Specimens examined. Sichuan: 1♀, Pingwu, Wanglang, E Reserve Station, 2666–2752m, 2.viii.2017, H-C Liang.

113. *Nemoraea fasciata* (Chao & Shi, 1985)

Specimens examined. Sichuan: 1♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 25.vii.2017, C-T Zhang. 8♂, 1♀, Xiaojin, Rilong to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, H-C Liang. 1♀, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, H-C Liang. Yunnan: 1♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang.

114. *Nemoraea javana* (Brauer & Bergenstamm, 1895)

Specimens examined. Sichuan: 1♂, Xiaojin, Rilong to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, H-C Liang.

115. *Nemoraea pellucida* (Meigen, 1824)

Specimens examined. Sichuan: 1♀, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 25.vii.2017, C-T Zhang. 1♂, Pingwu, Wanglang, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017, H-C Liang. 1♂, 1♀, Moxi to Nanmenguan village-Luding-Kangding, 1920–2161m, 9.viii.2017, H-C Liang. 2♂, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, C-T Zhang. 1♀, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, H-C Liang. 2♂, 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, C-T Zhang, X-Y Li.

TACHININI

5 genera, 15 species

116. *Chrysomikia viridicapitis* Chao & Zhou, 1987

Specimens examined. Sichuan, Pingwu, Wanglang: 1♀, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017; 1♀, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017, all by H-C Liang.

117. *Mikia apicalis* (Matsumura, 1916)

Specimens examined. Yunnan: 2♂, Deqen, Feilai Temple to Weixi, Tacheng, 2031–2225m, N27.54°, E99.04°, 18.vii.2017, C-T Zhang, X-Y Li.

118. *Mikia japonica* (Baranov, 1935)

Specimens examined. Sichuan: 1♂, Danba, Meiren Valley to Markang (Barkam), Songgang, 2727m, N31.08°, E110.83°, 12.viii.2017, C-T Zhang.

119. *Peleteria honghuang* Chao, 1979

Specimens examined. Sichuan: 15♂, 5♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li.

120. *Peleteria iavana* (Wiedemann, 1819)

Specimens examined. Sichuan, Pingwu, Wanglang: 4♀, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, H-C Liang; 5♀, E Reserve Station, 2666–2752m, 2.viii.2017, H-C Liang. 1♂, 2♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang. 68♂, 12♀, Wenchuan, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Rilong, Xiaojin to Baoxing, Jiabin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang. 1♀, Lushan, Longmen-Taiping-Shuangshi to Yaan City, 19.viii.2017, C-T Zhang. Yunnan: 1♀, Heqing County, Huangping, N26.13°, E100.29°, 14–15.vii.2017, C-T Zhang. 11♂, 5♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhihua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, C-T Zhang, X-Y Li.

121. *Peleteria trifurca* (Chao, 1963)

Specimens examined. Yunnan: 1♀, Deqen Valley to Baima & Meili Snow Mountains, 3300–4000m, 17.vii.2017, H-C Liang.

122. *Tachina (Tachina) amurensis* (Zimin, 1929)

Specimens examined. Sichuan: 1♂, Panzhihua, Cycas Nature Reserve to Yanbian, Yumen-Longshu village-Gesala, 25.vii.2017, C-T Zhang. 1♂, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, H-C Liang. Yunnan: 1♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains-Daju, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, H-C Liang.

123. *Tachina (Tachina) bombylia* (Villeneuve, 1936), a beautiful fly.

Specimens examined. Sichuan, Pingwu, Wanglang: 2♂, Changbaigou, 2588–2800m, N32.93°, E104.15°, 30.vii.2017; 1♀, Baixiongou, 2730–2941m, N33.00°, E104.03°, 3.viii.2017, all by H-C Liang.

124. *Tachina (Tachina) cheni* (Chao, 1987)

Specimens examined. Sichuan: 1♂, Danba, Meiren Valley to Markang (Barkam), Songgang, 2727m, N31.08°, E110.83°, 12.viii.2017, H-C Liang. 1♂, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, C-T Zhang. 1♂, Wenchuan, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. Yunnan: 2♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li, H-C Liang.

125. *Tachina (Tachina) iota* Chao & Arnaud, 1993

Specimens examined. Sichuan: 1♂, Pingwu, Wanglang, Qikeshu, 2653m, N33.94°, E104.14°, 4.viii.2017, H-C Liang. Yunnan: 2♂, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, H-C Liang.

126. *Tachina (Tachina) nupta* (Rondani, 1859)

Specimens examined. Sichuan: 1♀, Li Xian-Guqiangpuxi Valley to Wenchuan, Qianzhu Tunnel 2, 1800–2256m, 14.viii.2017, H-C Liang.

127. *Tachina (Tachina) sobria* Walker, 1853

Specimens examined. Sichuan: 1♂, Yaan, Mt. Mengding to Mingshan, 20.viii.2017, C-T Zhang.

128. *Tachina (Tachina) spina* (Chao, 1987)

Specimens examined. Sichuan: 1♂, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, C-T Zhang. 2♂, 1♀, Rilong, Xiaojin to Baoxing, Jiajin Mountains-Mahuang (leech) Valley-Fengtongzhai, 3084m, N30.91°, E102.65°, 17.viii.2017, C-T Zhang, X-Y Li, H-C Liang.

129. *Tachina (Tachina) subcinerea* Walker, 1853

Specimens examined. Sichuan: 1♂, Wanglang, W Reserve Station, 2722–2750m, N32.98°, E104.08°, 31.vii.2017, H-C Liang. 2♂, Danba, Meiren Valley, waterfall, 2727m, N31.08°, E101.83°, 12.viii.2017, C-T Zhang, X-Y Li. 1♂, Songgang- Markang-Miyaluo to Guergou-Li Xian, 13.viii.2017, C-T Zhang. Yunnan: 1♂, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhuhua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

130. *Tachina (Tachina) ursinoidea* (Tothill, 1918)

Specimens examined. Sichuan: 1♂, Wenchuan, Gengda (China Panda Garden)-Hetaoping, 1826m, N31.07°, E103.22°, 15.viii.2017, C-T Zhang. Yunnan: 1♂, Lijiang, Yulong Snow Mountains (Botanical Garden) to Wenhai, Daju, 2685–3107m, N26.98°, E100.17°, 20.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♂, 2♀, Lijiang, Daju to Jiangbian village-Baishuitai-Haba Snow Mountains, 2625–2794m, N27.35°, E100.16°, 21.vii.2017, C-T Zhang, X-Y Li, H-C Liang. 1♀, Ninglang, Lugu Lake-Yongsheng-Huaping to Sichuan, Panzhuhua, 2751–3359m, N27.57°, E100.37°, 24.vii.2017, H-C Liang.

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