

TRICHOPTERA NEWSLETTER 16: 21-24.

A REVIEW OF THE CHINESE GENUS STENOPSYCHE McLACHLAN

(TRICHOPTERA: STENOPSYCHIDAE)

TIAN LI-XIN

(Nanjing Agricultural University)

1. HISTORY OF THE GENUS STENOPSYCHE

On the basis of a male specimen collected from Assam in the North of India, McLachlan (1866) described a new species of Stenopsyche griseipennis as Holotype and erected a new genus, Stenopsyche which belonged to the family Hydropsychidae. Ulmer (1917) divided Hydropsychidae of his predecessor into Philopotamidae, Hydropsychidae, Polycentropidae and Psychomyidae. He put the genus Stenopsyche into Philopotamidae because of its three ocelli and tibial spur count 3 4 4, although the genus differs greatly from the family Philopotamidae in its shape of wings, venation, size of body and male genitalia etc. Banks (1913) thought that the four families described by Ulmer can only be considered as four subfamilies of the family Hydropsychidae, and he included Stenopsyche in the Hydropsychidae. Martynov (1926) established the family Stenopsychidae by combining Stenopsyche, Stenopsychodes Ulmer 1926 and Pseudostenopsyche Döhler 1914-15. Kuwayama (1930) added Parastenopsyche to the family. Hwang (1963) was sure that the Stenopsychidae should include Stenopsychodes etc., and he suggested that the identification characters of Stenopsyche and Parastenopsyche should be male genitalia. In the family Stenopsychidae, Schmid (1969) shifted species of the genus Parastenopsyche into the genus Stenopsyche and named them the sauteri group. The present author thinks that although the genera Parastenopsyche and Stenopsyche are similar in shape of body and venation, the male genitalia and the tibial spur count of these two genera cannot become identification characters, so that the genus Parastenopsyche is not a natural group in phylogeny. It is more reasonable to shift species such as Parastenopsyche bergeri (Martynov), P. coreana Kuwayama, P. sauteri Ulmer and P. sinanensis Kobayashi to the genus Stenopsyche.

2. THE FAUNA OF THE GENUS STENOPSYCHE

In the genus Stenopsyche, of the 65 species known in the world, almost all are in Asia except S. ulmeri Navás which is found in Africa. In order to understand the distribution of this genus, we must trace the geological history and know something about accretion, dispersion and drift of Gondwana and Laurasia. The genus Stenopsyche is the most primitive genus of the family and retained its distribution records in the early Tertiary period in Europe, but was separated due to vertical split of Gondwana and Laurasia, northern drift of Africa and slight rotation, so that the palaeomediterranean sea (Tethys Sea) closed between the east of Laurasia and Gondwana. In the Mesozoic, the Indian subcontinent joined with the east of Africa, and later the Indian plate shifted east for separation of Gondwana and Laurasia. The appearance of Stenopsyche ulmeri in Congo and Luanda shows the close relationship between Asia and Africa. With the formation of the Himalayas and the western mountains of China, the shift and diffusion of species of Stenopsyche was made. Among them, S. ochripennis Albarda had spread farthest south and its appearance in Sumatra and Poluzhou proves that all these islands belonged to the Oriental Region, although they are separated from the continents by ocean.

As described above, we know that species of the genus Stenopsyche belong mainly to the Oriental region, especially to Asia. Many species are distributed in China, Nepal, Sikkim, India, Thailand, Laos, Afghanistan,

Vietnam and Burma, but a few species may reach the east of the USSR, the North of China, Japan and Korea, and one single species is found in Africa.

There are 42 species of the genus in China, 66% of the world species. There are 31 species found only in China. Because the immature stages of Stenopsyche live in swiftly-flowing mountain streams, they are found mainly in the Qinling Mountains and the south of the Huaihuo River, in the Chinese provinces of Zhejiang, Fujian, Guangdong, Yunnan, Sichuan and Xizang.

Species of the genus Stenopsyche may be grouped as follows:

1. Those of widespread Oriental distribution, in the northern parts of Shanxi and Hebei provinces, e.g. S.himalayana and S.navasi.
2. Those of the Himalayas and mountains of south-west China in Yunnan, Xizang and Sichuan provinces, e.g. S.chagyaba and haimavatika.
3. Those of tropical and subtropical rainforest, in Guangdong, Hainan, south of Yunnan and Taiwan provinces, e.g. S.appendiculata and S.trilobata.
4. Those of the Palearctic region, Peking and Haerbin, e.g. S.marmorata and S.bergeri.

3. THE CATALOGUE OF SPECIES OF STENOPSYCHE IN CHINA.

Genus Stenopsyche McLachlan, 1866.

Stenopsyche McLachlan, 1866:264; Type species: griseipennis McLachlan, monobasic.

Parastenopsyche Kuwayama 1930: 111, 114; type species: Stenopsyche sauteri Ulmer, original designation.

Stenopsyche, Schmid 1969:198-207; Parastenopsyche as junior synonym.

Apiguna group

1. Stenopsyche appendiculata Hwang.

Yunnan (Jinping Hetouzhuan 1700m)

2. Stenopsyche chagyba Tian

Sichuan (Kangding Zhuba-long 2500m, Batang 2600m), Xizang (Chayajitang 3200m, Changdu 3200m)

3. Stenopsyche dirghajihvi Schmid

Shanxi (Taibai Mts. Loutouchun, Songpingsi), Sichuan (Lixian Miyialuo 2700m), Yunnan (Zhongdian Wengshui 3000m), Xizang (Jilong 2030m, Yiadong 2750m); Sikkim, Kameng.

4. Stenopsyche grahami Martynov

Shanxi (Taibai Mts 1700m), Hubei (Shennongjia), Sichuan (Emei Mts Xixiangchi and Guanxian), Yunnan (Lushui Yaojiaping 2500m, Zhongdian Gezai 3150m, Yunlong 3450m, Xizang Zhangmu 2400m).

5. Stenopsyche navasi Ulmer

Zhejiang (Qiantang), Hubei (Shenlongjia), Sichuan (Nanping Jiuzhaigou 2300m, Luding Moxi 1550m, Batang Zhubalog 2500m, Xiangzhengchaik 3000m), Yunnan (Lijiang Yulong Mts 2700m, Yufengsi, Deqin Baimangxue Mts 3700m, Lushui Yaojiaping 2500m, Zhongdian Chongjianghe and Dali), Shanxi (Taibai Mts), Hebei (Tianjin), Xizang, Guangdong; Laos.

6. Stenopsyche omeiensis Hwang

Sichuan (Emei Mts Qingyinge)

7. Stenopsyche triangularis Schmid

Shanxi (Taibai Mts 1700m).

Marmorata group

8. Stenopsyche angusrara Martynov

Syn. griseipennis Ulmer

Shanxi, Sichuan, Jiangxi (Jiulian Mts), Fujian (Ninghua), Guangdong.

9. Stenopsyche dentigera Ulmer

Syn. fukienica Schmid 1967

Jiangxi (Jinggang Mts), Fujian (Shaowu 500m, Chongan, Guangze).

10. Stenopsyche drakon Weaver

Taiwan (Taihoku, Arisan, Bukai, Hinokiyama, Hori, Suisha)

11. Stenopsyche griseipennis McLachlan

Syn. quadrilobata Martynov, pallidipennis Kimmins

Sichuan (Luding Xinxing 1960m); USSR, Korea, India, Sikkim, Japan.

12. Stenopsyche haimavatika Schmid

Hubei (Shennongjia), Jiangxi (Juilian Mts), Yunnan (Jinping Hetouzhai, Jiangdong 1170-1200m); Nepal, Sikkim.

13. Stenopsyche laminata Ulmer

Sichuan (Chengdu, Hongya, Emei Mts Qingyinge, and Guangxian), Yunnan (Jingdong), Guangdong.

14. Stenopsyche lotus Weaver

Zhejiang (Tunglu)

15. Stenopsyche marmorata Navás

Peking (Wofusi), Helongjiang (Haerbin), Xinjiang (Aletai), Taiwan; Japan, USSR, Korea.

16. Stenopsyche pallidipennis Martynov

Taiwan; Laos, Japan.

17. Stenopsyche taiwanensis Weaver

Taiwan (Nantowco, Lu-shan, ca.30 km E Wu-she 1000m)

Sauteri group

18. Stenopsyche bergeri Martynov

Heilongjiang; USSR, Korea, Ussuri.

19. Stenopsyche coreana Kuwayama

Liaoning, Jilin, Heilongjiang; Korea

20. Stenopsyche sauteri Ulmer

Taiwan; Japan.

Martynovi group

21. Stenopsyche banksi Mosely

Jiangxi (Nanchang), Fujian (Fuzhou), Taiwan

22. Stenopsyche chekiangana Schmid

Zhejiang (Wenzhou)

23. Stenopsyche himalayana Martynov

Sichuan, Yunnan (Yunlong); Afghanistan, Pakistan, Sikkim, India, Laos, Vietnam.

24. Stenopsyche martynovi Banks

Sichuan (Kangding Xinduqiao 2600m), Xizang

25. Stenopsyche trilobata Tian & Weaver

Hainan (Jianfengling Erfeng)

Pubescens group

26. Stenopsyche ghaikamaidanwalla Schmid

Syn. paranavasi Huan & Tian, 1981

Sichuan (Batang 3370m), Xizang (Changdu 3200m, Mangkang 3900m, Yiadong 2750m, Zhangmu 2400m).

27. Stenopsyche moselyi Banks

Sichuan

28. Stenopsyche pjasetzkyi Martynov

Hebei, Shanxi (Taibai Mts Longgangsi), Sichuan, Guangdong, Taiwan

29. Stenopsyche pubescens Schmid

Shanxi (Taibai)

30. Stenopsyche sichuanensis Tian & Zheng (sp.nov.)

Sichuan (Hongya)

31. Stenopsyche uncinata Navás

Jiangxi (Guiling); Vietnam.

Simplex group

32. Stenopsyche brevata Tian & Zheng

Yunnan (Ruili)

33. Stenopsyche chinensis Hwang

Fujian (Chongan (Tongmu), Fuzhou).

34. Stenopsyche denticulata Ulmer

Fujian (Chongan, Daan, Xingcun, Changding, Chengguan, Guangze), Guangdong.

35. Stenopsyche dubia Schmid

Fujian (Guadun 2300m)

36. Stenopsyche longispina Ulmer

Sichuan (Yaan), Guangdong.

37. Stenopsyche rotundata Schmid

Shanxi (Taibai Mts, Gangpingsi), Zhejiang (Qiantang)

38. Stenopsyche simplex Schmid

Shanxi (Taibai Mts)

39. Stenopsyche stötzneri Döhler

Sichuan (Yaan, Chengdu, Guangxian, Qingcheng Mts, Emei Mts), Jianxi (Jiulian Mts).

40. Stenopsyche tienmushanensis Hwang

Syn. duplex Schmid

Hubei (Shenlongjia), Zhejiang (Tianmu Mts and Muzhou), Anhui (Jiuhua Mts), Shanxi (Taibai Mts, Songpingsi, Shangnan Daotianchun), Guangxi (Jinxu).

41. Stenopsyche uniformis Schmid

Fujian (Shaowu 500m, Chongan Guadun 2300m).

Two additional species were based on the descriptions of females only, and thus cannot be reliably assigned to a species group:

42. Stenopsyche huangi Tian

Xizang (Leimuqisangduo 3700m)

43. Stenopsyche tibetana Navás

Xizang

x x x x x x x x x x x x

LIST OF RESEARCH WORKERS ON TRICHOPTERA

Drs. Abdul RAHIM bin ISMAIL; lecturer.

Jabatan Biologi, Universiti Pertanian Malaysia, 43400 Serdang, Selangor, Malaysia.

Present interest: Stenopsychidae (Stenopsyche), Hydropsychidae (Hydropsyche, Cheumatopsyche, Hydromanicus, Macrostemum, Diplectrona), Polycentropodidae (Polyplectropus); taxonomy, biology, ecology, toxicology.

Investigation area: Malaysia; South East Asia.

Material wanted: Larvae, pupae and adults of Stenopsyche, Hydropsyche, Cheumatopsyche, Hydromanicus, Macrostemum, Diplectrona, Polyplectropus of Malaysia and South East Asia.

Information wanted: 1. Addresses of museums and persons (except Washington and Hamburg) whom I can contact for the loan of type specimens because all type specimens of caddisflies from southeast Asia are kept in Europe and North America. - 2. I would like to borrow the type specimen of Stenopsyche siamensis Martynov. - 3. Publications and the type specimen of Stenopsyche ochripennis. - Other interests: Taxonomy of Chironomidae, Simuliidae, Chaoboridae.

Comment: I have just started doing my research. At present I am doing postgraduate studies under the supervision of Dr. J. M. Edington (Cardiff).

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Trichoptera Newsletter](#)

Jahr/Year: 1989

Band/Volume: [16](#)

Autor(en)/Author(s): Tian Lixin

Artikel/Article: [A Review of the Chinese Genus *Stenopsyche* McLachlan \(Trichoptera: Stenopsychidae\) 21-24](#)