

CHINA WATER BEETLE SURVEY (1999 - 2001)

M.A. JÄCH & L. Ji

Abstract

Sampling localities (numbers 348 - 496) of the China Water Beetle Survey (1999 - 2001) are described.

Key words: China Water Beetle Survey, China, Coleoptera, locality list.

Introduction

The China Water Beetle Survey currently is celebrating its 10th anniversary. The first joint expedition, which launched the CWBS co-operation project of the Natural History Museum Vienna (Section of Coleopterology) and the Chinese Academy of Sciences (Institute of Applied Ecology, Shenyang), was carried out in autumn 1993. Since then, samples were taken from almost 500 aquatic habitats, and three volumes of the WATER BEETLES OF CHINA, containing numerous taxonomic revisions and accurate distribution maps, were published (see also JÄCH & Ji 1995, 1998).

Today, China cannot be regarded any more as "*terra incognita*" in terms of aquatic coleoptera. About 200 new species, eight new genera and one new family were described since 1993.

During these 10 fruitful years, faunistic and ecological surveys were carried out in the following provinces (PR), autonomous regions (AR), municipalities directly under the Central Government (M), and special administrative regions (SAR) of Mainland China: Anhui (PR), Beijing (M), Fujian (PR), Gansu (PR), Guangdong (PR), Guangxi (AR), Guizhou (PR), Hainan (PR), Hong Kong (SAR), Hunan (PR), Jiangxi (PR), Jilin (PR), Liaoning (PR), Macao (SAR), Nei Mongol (AR), Shaanxi (PR), Shandong (PR), Sichuan (PR), Yunnan (PR), Zhejiang (PR). Undisputedly, the tropical belt was the preferred goal of our expeditions, mainly because of its unparalleled biodiversity. Consequently, little or no information about the water beetle fauna is available from Chongqing (M)¹, Hebei (PR), Heilongjiang (PR), Henan (PR), Hubei (PR), Jiangsu (PR), Ningxia (AR), Qinghai (PR), Shanghai (M), Shanxi (PR), Tianjin (M), Tibet (AR), Xinjiang (AR). Additional CWBS expeditions are already planned to fill up the white spots on the distribution maps, especially in the western and northwestern parts of the country.

At least 200 undescribed Chinese species are still housed in the Naturhistorisches Museum Wien (NMW). More than 90 % of these species belong to three families: Elmidae, Hydraenidae, and Hydrophilidae. Hopefully, many of these new species will be described in the coming years. It should, however, be kept in mind, that comprehensive revisions are required for certain speciose elmid and hydrophilid genera, e.g. *Stenelmis* DUFOUT, and *Agraphhydrus* RÉGIMBART.

At present, there are no plans to publish additional volumes of the WATER BEETLES OF CHINA. Therefore, taxonomic contributions concerning CWBS material shall be submitted to other pertinent journals, such as Koleopterologische Rundschau or Annalen des Naturhistorischen Museums in Wien, in future.

¹ Chongqing became a municipality in 1997 and now includes a vast area formerly belonging to Sichuan. With 82,400 km² Chongqing is almost as large as Austria.

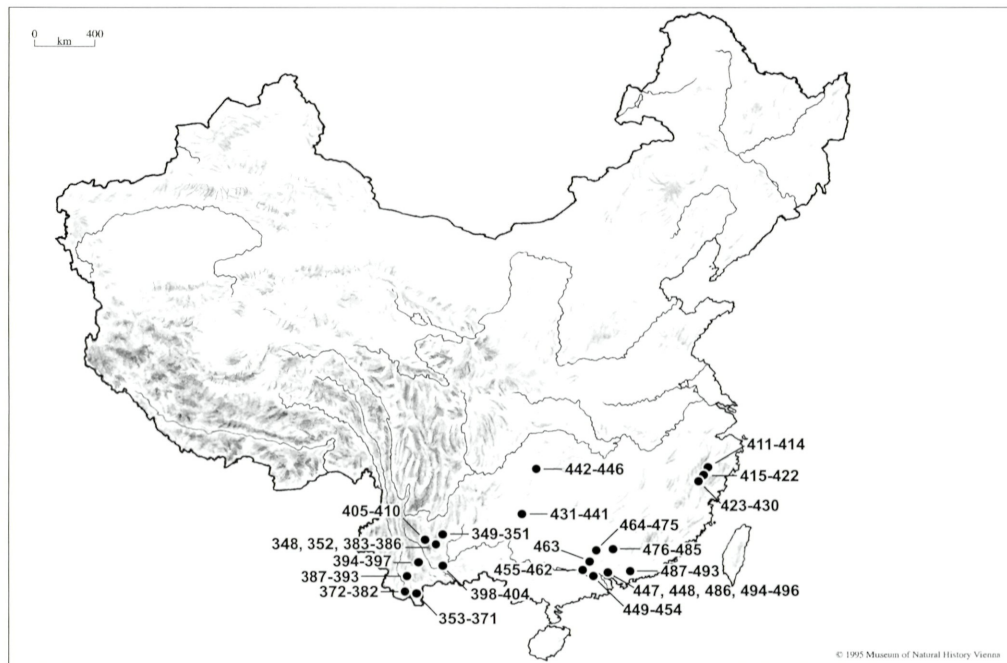


Fig. 1: China Water Beetle Survey, sampling localities 348 - 496 (1999 - 2001).

List of localities sampled by the CWBS, 1999 – 2001

In the years 1999 – 2001 collections have been made in four provinces (Guangdong, Guizhou, Yunnan, and Zhejiang) (see Fig. 1).

Distances given in kilometers are to be understood as road distances, not bee-line distances.

CWBS loc. 348: **Yunnan Province**, Kunming City Region, plain near River Panlong, northern part of Kunming City, ca. 1800 m a.s.l.; rice fields (partly abandoned), irrigation canals and muddy pools; 2.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 4).

CWBS loc. 349: **Yunnan Province**, Qüjing Prefecture, Liangwang Shan (= King Liang Mountains), ca. 100 km NNE Kunming, few km E Banqiao, ca. 2300 m a.s.l., 25°33'14"N 103°05'52"E; river (tributary of Xiao Jiang (= tributary of Jang Jiang)), ca. 4 - 6 m wide, unshaded, shrubs; 3.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.

CWBS loc. 350: **Yunnan Province**, Qüjing Prefecture, Liangwang Shan (= King Liang Mountains), ca. 2300 m a.s.l., 25°33'14"N 103°05'52"E; stream, ca. 1 - 2 m wide (right hand side tributary of CWBS loc. 349); 3.XI.1999; leg. M.A. Jäch & H. Schönmann (see Fig. 2).

CWBS loc. 351: **Yunnan Province**, Qüjing Prefecture, near road Songming - Yangjie, ca. 60 km NNE Kunming, altitude not recorded, 25°23'16"N 103°05'24"E; pond, size: ca. 50 x 100 m; 3.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.

- CWBS loc. 352: **Yunnan Province**, Kunming City Region, northern part of Kunming City, Botanical Gardens at South China Institute of Botany, ca. 1800 m a.s.l.; artificial ponds; 4.XI.1999; leg. M.A. Jäch, M. Wang & Y. Wei.
- CWBS loc. 353: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, ca. 500 m a.s.l.; at light; 4. - 7.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 354: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, near Mangmo Village, road Menglun - Ganlanba, ca. 15 km W Menglun, ca. 700 - 800 m a.s.l.; stream (left hand side tributary of CWBS loc. 355), ca. 1 - 2 m wide, flowing through degraded primary forest; 5.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 5).
- CWBS loc. 355: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, at Mangmo Village, ca. 15 km W Menglun, ca. 700 m a.s.l., 21°55'37"N 101°08'35"E; River Mangsha, ca. 10 m wide, flowing through degraded primary forest and cultivated land; 5.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 356: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, Menglun Tropical Botanical Garden, ca. 500 m a.s.l.; ornamental pond, size: ca. 10 x 40 m; 6.XI.1999; leg. M.A. Jäch & H. Schönmann (see Fig. 6).
- CWBS loc. 357: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, Green Stone Forest Park, ca. 3 km S Menglun, ca. 500 m a.s.l.; pond (size: ca. 10 x 20 m) and small effluent (ca. 0.5 m wide and disappearing in ponor after ca. 20 m), shaded, surrounded by primary forest; 6.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 3).
- CWBS loc. 358: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, Menglun Tropical Botanical Garden, ca. 500 m a.s.l.; stream, ca. 1 m wide, densely shaded, flowing through primary forest; 6.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 359: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, ca. 10 km NW Menglun, along road Menglun - Mengyang, ca. 700 m a.s.l.; Wushiwu He (= River Fiftyfive), ca. 3 - 5 m wide, flowing through primary forest in steep valley; 7.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 360: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Menglun Town, ca. 700 - 800 m a.s.l.; stream (tributary of CWBS loc. 359), ca. 1 - 2 m wide, flowing through dense primary forest, ca. 10 km NW Menglun; 7.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 9).
- CWBS loc. 361: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Mengyüan, ca. 50 km SSE Menglun, ca. 700 m a.s.l.; river, ca. 10 m wide, flowing through agricultural land and degraded forest; 8.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 7).
- CWBS loc. 362: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, Mengyüan Village, ca. 50 km SSE Menglun, ca. 700 m a.s.l.; muddy pools (used by buffalo), margins with grass; 8.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 363: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, ca. 50 km SSE Menglun, below monastery near Mengyüan, ca. 700 m a.s.l.; karst spring, ca. 1.5 m wide; 8.XI.1999; leg. M. Wang & Y. Wei.
- CWBS loc. 364: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, along Mengla - Mengyüan road, ca. 6 km NW Mengla, ca. 700 m a.s.l.; small river (tributary of River Mengla), ca. 5 m wide, flowing through primary forest (partly degraded) and a few villages; 8.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 8).

- CWBS loc. 365: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, ca. 6 km NW Mengla, ca. 700 m a.s.l.; small stream (right hand side tributary of CWBS loc. 364), ca. 0.5 m wide, flowing through primary forest; 8.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 366: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, near Mengla, ca. 700 m a.s.l.; small pools, margins with mud and grass; 9.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 367: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, ca. 6 km NW Mengla, ca. 700 m a.s.l.; small stream (left hand side tributary of CWBS loc. 364), ca. 1 m wide, flowing through dense primary forest; 9.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 368: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, near summit of pass between Mengla and Mengyuan, ca. 20 km NW Mengla, ca. 1000 m a.s.l.; small stream, ca. 1 m wide, flowing in steep ravine through Dragon Forest (dense primary forest); 9.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 369: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, ca. 50 km NW Mengla, ca. 800 m a.s.l.; River Nangong, ca. 5 - 8 m wide, flowing through dense forest; 9.XI.1999; leg. M.A. Jäch & H. Schönmann.
- CWBS loc. 370: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, ca. 50 km NW Mengla, ca. 800 m a.s.l.; stream (left hand side tributary of CWBS loc. 369), ca. 1 - 2 m wide, flowing through primary forest; 9.XI.1999; leg. M. Wang & Y. Wei.
- CWBS loc. 371: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Mengla County, near Yanuo Village, on pass (Mt. Jinuo), ca. 35 km NW Menglun, ca. 1100 m a.s.l.; small stream, ca. 1 m wide, flowing along road (Menglun - Mengyang) and through primary forest; 10.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 372: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, few km E Mengyang, along road to Menglun, ca. 800 m a.s.l.; man-made lake; 10.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 373: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, Elephant Valley, Sanchahe (= Three Rivers) Forest Reserve, ca. 13 km N Mengyang, ca. 700 m a.s.l.; three small streams, ca. 0.5 - 1.0 m wide, flowing through dense primary forest; 10.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 374: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, pass, road Jinghong - Menghai, ca. 20 km W Jinghong, ca. 1000 m a.s.l.; two small streams, ca. 0.5 m wide, partly shaded, flowing through shrubs; 11.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 375: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, road Jinghong - Menghai, ca. 25 km W Jinghong, ca. 1000 m a.s.l.; two small shallow springfed roadside pools, size: ca. 2 m², shaded, bottom with mud and leaves; 11.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 376: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Menghai County, plain around Mengao Village, ca. 12 km NW Menghai, ca. 1000 m a.s.l.; various pools (roadside ditches, mud pools between rice fields); 11.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 377: **Yunnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, "Original Forest Park", along highway Jinghong - Mengyang, ca. 7 km NE Jinghong, ca. 600 m a.s.l.; river, ca. 5 m wide, flowing through degraded primary forest; 12.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei (see Fig. 10).

- CWBS loc. 378: **Yünnan Province**, Xishuangbanna Dai Autonomous Prefecture, Menghai County, ca. 11 km N Mengyang, near "Elefant Valley", ca. 700 m a.s.l.; stream, ca. 1 m wide, meandering through primary forest; 12.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 379: **Yünnan Province**, Xishuangbanna Dai Autonomous Prefecture, Menghai County, pass (near summit) on old road Jinghong - Mengyang, ca. 1100 m a.s.l.; small stream, ca. 0.5 m wide, partly shaded, flowing through shrubs and cultivated land; 12.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 380: **Yünnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, eastern part of Jinghong City, near highway Jinghong - Mengyang, Mekong plain, ca. 500 m a.s.l.; inundated vegetable fields; 12.XI.1999; leg. M.A. Jäch, H. Schönmann, M. Wang & Y. Wei.
- CWBS loc. 381: **Yünnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, few km SE Jinghong City, near left shore of Lancang Jiang (= River Mekong), ca. 500 m a.s.l.; small pools, mud and sand; 13.XI.1999; leg. M.A. Jäch, H. Schönmann & M. Wang.
- CWBS loc. 382: **Yünnan Province**, Xishuangbanna Dai Autonomous Prefecture, Jinghong City Region, few km E Jinghong City, near highway Jinghong - Mengyang, ca. 500 m a.s.l.; margin (gravel and mud) of river (lower course of CWBS loc. 377, before entering Mekong plain), ca. 5 m wide; 13.XI.1999; leg. M.A. Jäch, H. Schönmann & M. Wang.
- CWBS loc. 383: **Yünnan Province**, Kunming City Region, few km SW Chengjiang, ca. 1600 m a.s.l.; several streams, ca. 2 - 3 m wide, flowing into Fuxian Lake, through terraced, cultivated (mainly vegetables) land; 14.XI.1999; leg. M.A. Jäch & Y. Wei.
- CWBS loc. 384: **Yünnan Province**, Kunming City Region, ca. 1600 m a.s.l.; several small pools (roadside ditches, rain pools, mud pools, springfed pools) around CWBS loc. 383; 14.XI.1999; leg. M.A. Jäch & Y. Wei.
- CWBS loc. 385: **Yünnan Province**, Yuxi Prefecture, Chengjiang County, plain N of Fuxian Lake, few km E Chengjiang, ca. 1600 m a.s.l.; small stream, ca. 1 m wide, flowing into Fuxian Lake, through concrete channel in cultivated (mainly vegetables) land; 14.XI.1999; leg. M.A. Jäch & Y. Wei.
- CWBS loc. 386: **Yünnan Province**, Yuxi Prefecture, Chengjiang County, near CWBS loc. 385, ca. 1600 m a.s.l.; shaded pool, size: ca. 50 x 10 m; 14.XI.1999; leg. M.A. Jäch & Y. Wei.
- CWBS loc. 387: **Yünnan Province**, Simao Prefecture, 54 km SW Simao, Cuiyun Resort, ca. 1000 m a.s.l.; River Jian Shan, upwelling of karst river, ca. 5 - 7 m wide, with large boulders, little vegetable debris; 15.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 388: **Yünnan Province**, Simao Prefecture, 36 km SW Simao, road Simao - Lancang, ca. 1000 m a.s.l.; stream, 3 - 5 m wide, flowing through dense pine forest, substrate: sandstone rocks, hardly gravel and organic debris; 15.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 389: **Yünnan Province**, Simao Prefecture, River Caiyang Nature Reserve, 40 km S Simao; small stream, flowing through dense mountain forest, ca. 1350 m a.s.l.; 16.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 390: **Yünnan Province**, Simao Prefecture, River Caiyang Nature Reserve, 35 km S Simao, ca. 1100 m a.s.l.; river, ca. 5 - 7 m wide, flowing through primary forest, sandstone cobbles; 16.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 391: **Yünnan Province**, Simao Prefecture, River Caiyang Nature Reserve, 35 km S Simao, ca. 1100 m a.s.l.; roadside pool near CWBS loc. 390; 16.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 392: **Yünnan Province**, Simao Prefecture, 25 km SW Simao, road Simao - Lancang, Zhu Shan (= Bamboo Mountain), ca. 1000 m a.s.l.; River Zhu, 5 - 7 m wide, flowing through degraded forest; sample taken from plant debris after pronounced flood period; 17.XI.1999; leg. H. Schönmann & M. Wang.

- CWBS loc. 393: **Yünnan Province**, Simao Prefecture, 25 km SW Simao, road Simao - Lancang, Zhu Shan, ca. 1000 m a.s.l.; forest stream (right tributary of River Zhu Shan), 1 – 2 m wide, residual pools and plant debris, substrate: rock steps, coarse and fine sandstone gravel; 17.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 394: **Yünnan Province**, Simao Prefecture, Mojiang County, 35 km SW Mojiang, ca. 1000 m a.s.l.; mountain river, ca 2 – 3 m wide (right tributary of River Naji), large boulders of sandstone and very fine sediment, flowing through cultivated land and pine forest; 19.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 395: **Yünnan Province**, Simao Prefecture, Mojiang County, 35 km SW Mojiang, ca. 1000 m a.s.l.; forest stream (right tributary of CWBS loc. 394), ca. 50 cm wide, with sinter, small pools and waterfalls; 19.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 396: **Yünnan Province**, Simao Prefecture, Mojiang County, 35 km SW Mojiang, ca. 1050 m a.s.l.; River Naji, 5 – 7 m wide, waterfalls and pools with fine sand; 19.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 397: **Yünnan Province**, Simao Prefecture, Mojiang County, 35 km SW Mojiang, ca. 1050 m a.s.l.; small stream (right tributary of River Naji), ca. 30 – 50 cm wide, steep, sinter, seepages; 19.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 398: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 10 km N Gejiu, ca. 1300 m a.s.l.; river, ca. 2 – 3 m wide, flowing through deforested area, sediment: marble, limestone, sandstone, clay; 22.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 399: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 15 km S Gejiu, ca. 1700 m a.s.l.; Tou Dao Shui (= Number One Water) stream, 50 – 100 cm wide, canalized, flowing through crop fields, pastures and pine forest, riparian vegetation dense, floating rootlets; 23.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 400: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 30 km S Gejiu, surroundings of Tian Ba Zhi, ca. 1300 m a.s.l.; mountain stream, ca. 2 – 3 m wide, with sinter, mossy waterfalls and marble boulders, dense riparian vegetation, *Cunninghamia* forest; 23.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 401: **Yünnan Province**, Gejiu Prefecture, Gejiu City, surroundings of Tian Ba Zhi, 30 km S Gejiu, ca. 1300 m a.s.l.; small stream, ca. 1 m wide, slowly flowing tributary to CWBS loc. 400, rich riparian vegetation; 23.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 402: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 5 km W Gejiu, ca. 1900 m a.s.l.; springfed karst pool, with rich aquatic vegetation, in *Cunninghamia* forest; 24.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 403: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 35 km NNW Gejiu, Tang Dian, ca. 1000 m a.s.l.; fish ponds; 24.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 404: **Yünnan Province**, Gejiu Prefecture, Gejiu City, 15 km S Gejiu, ca. 1700 m a.s.l.; stream (upper course of CWBS loc. 399), 50 – 100 cm wide, canalized, flowing through crop fields, pastures and pine forest, riparian vegetation dense, floating rootlets; 24.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 405: **Yünnan Province**, Chuxiong Prefecture, Lufeng City, Wu Tai Shan Forest Park, 30 km N Lufeng, ca. 2150 m a.s.l.; small stream, ca. 50 cm wide, flowing in deep ravine through oak forest; 26.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 406: **Yünnan Province**, Chuxiong Prefecture, Lufeng City, Wu Tai Shan Forest Park, 30 km N Lufeng, ca. 2100 m a.s.l.; man made lake; 26.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 407: **Yünnan Province**, Chuxiong Prefecture, Lufeng City, Wu Tai Shan Forest Park, 30 km N Lufeng, ca. 2150 m a.s.l.; stream, ca. 1 – 2 m wide, substrate: sandstone gravel, plant debris, flowing through forest; 26.XI.1999; leg. H. Schönmann & M. Wang.

- CWBS loc. 408: **Yunnan Province**, Chuxiong Prefecture, Lufeng City, 15 km W Lufeng, ca. 1500 m a.s.l.; stream, ca. 30 – 50 cm wide, with waterfalls, moss, small pools with leaves, strongly insolated; 27.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 409: **Yunnan Province**, Chuxiong Prefecture, 10 km N Yipinglang, near Ban Jiu, ca. 1700 m a.s.l.; River Da Shui Go, 1 – 2 m wide, with large sandstone boulders, little organic debris; 27.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 410: **Yunnan Province**, Chuxiong Prefecture, 25 km N Yipinglang, near Gao Feng, ca. 2100 m a.s.l.; small springfed pools on meadow, and man made lake; 27.XI.1999; leg. H. Schönmann & M. Wang.
- CWBS loc. 411: **Zhejiang Province**, 5 km N Lishui (= Beautiful Water) City, Baiyunshan (= White Cloud Mountain) Forest Park, 250 - 300 m a.s.l.; River Liyangtan, ca. 5 m wide, with pebbles and large cobbles, slightly polluted, flowing through gorge, surrounded by *Cunninghamia* forest; 1.IV.2001; leg. W. Wang.
- CWBS loc. 412: **Zhejiang Province**, 5 km N Lishui City, Baiyunshan Forest Park, ca. 270 m a.s.l.; small stream near CWBS loc. 411, ca. 1 m wide, with coarse small rock, fast flowing through *Cunninghamia* forest; 1.IV.2001; leg. M. Wang.
- CWBS loc. 413: **Zhejiang Province**, Lishui City Region, Laozhu (= Old Bamboo Forest) County, ca. 3 km N of the city, Qilongkeng Shan, ca. 300 m a.s.l.; small stream, ca. 0.5 m wide, with small rocks, slowly flowing through *Cunninghamia* forest; 2.IV.2001; leg. M. Wang.
- CWBS loc. 414: **Zhejiang Province**, Lishui City Region, Laozhu County, 32 km W Lishui City, ca. 4 km NW Laozhu City, ca. 300 m a.s.l.; small stream, 0.5 m wide, substrate: coarse gravel and sand, flowing through *Cunninghamia* forest and orange gardens, slightly polluted; 2.IV.2001; leg. M. Wang.
- CWBS loc. 415: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 5 km E Yunhe City, side of road from Yunhe to Shawan, 2 km E Chongtuo Town, ca. 450 m a.s.l.; river, ca. 10 m wide, swiftly flowing through narrow valley, slightly polluted; 3.IV.2001; leg. M. Wang.
- CWBS loc. 416: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 12 km SE Yunhe City, 3 km E Chongtuo Town, ca. 550 m a.s.l.; stream, ca. 2 m wide, very cold, slightly polluted, swiftly flowing through *Cunninghamia* forest and rice fields; 3.IV.2001; leg. M. Wang.
- CWBS loc. 417: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 2 km NE Yunhe City, ca. 400 m a.s.l.; small stream, < 0.5 m wide, substrate: sand, slightly polluted, surrounded by *Cunninghamia* forest, bamboo forest and rice fields; 4.IV.2001; leg. M. Wang.
- CWBS loc. 418: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 40 km SW Yunhe City, 2 km E Yunfeng Village, ca. 950 m a.s.l.; small stream, 1 m wide, very cold, fast flowing between *Cunninghamia* trees and bamboo; 5.IV.2001; leg. M. Wang.
- CWBS loc. 419: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 40 km SW Yunhe City, 1 km W Yunfeng Village, 950 m a.s.l.; small stream, 1 m wide, cold, flowing through *Cunninghamia* forest and rice fields, slightly polluted; 5.IV.2001; leg. M. Wang.
- CWBS loc. 420: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 34 km SW Yunhe City, 1 km N Huangyuan Village, 1150 m a.s.l.; stream, ca. 5 m wide, very cold, fast flowing through *Cunninghamia* and bamboo forest; 6.IV.2001; leg. M. Wang.
- CWBS loc. 421: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 34 km SW Yunhe City, 2 km S Huangyuan Village, 1100 m a.s.l.; stream, ca. 4 m wide, similar CWBS loc. 420; 6.IV.2001; leg. M. Wang.
- CWBS loc. 422: **Zhejiang Province**, Lishui Prefecture, Yunhe County, 20 km SW Yunhe City, Yunhe - Yunfeng Village road, 1000 m a.s.l.; stream, ca. 3 m wide, very cold, slightly polluted, fast flowing through *Cunninghamia* and bamboo forest; 7.IV.2001; leg. M. Wang.

- CWBS loc. 423: **Zhejiang Province**, Lishui Prefecture, Longquan (= Dragon Spring) City, 35 km NW Longquan City, road from Longquan City to Zhulong (= Dragon House) Town, ca. 800 - 850 m a.s.l.; three small streams, ca. 1 - 2 m wide, very cold, very clean, very fast flowing through forest, substrate: granitic gravel; 9.IV.2001; leg. M. Wang.
- CWBS loc. 424: **Zhejiang Province**, Lishui Prefecture, Longquan City, 30 km NW Longquan City, Longquan City - Zhulong Town road, 6 km N Huangyong Village, 800 m a.s.l.; small stream, 1 m wide, moderately fast flowing through bamboo forest (upper course) and rice fields (lower course), slightly polluted; 9.IV.2001; leg. M. Wang (see Fig. 11).
- CWBS loc. 425: **Zhejiang Province**, Lishui Prefecture, Longquan City, 26 km NW Longquan City, Longquan City - Zhulong Town road, 2 km SW Shuangling (= Double Peak) Village, 500 m a.s.l.; rice field; 9.IV.2001; leg. M. Wang.
- CWBS loc. 426: **Zhejiang Province**, Lishui Prefecture, Longquan City, 20 km NW Longquan City, Longquan City - Zhulong Town road, 2 km S Lingshang Village, 500 m a.s.l.; small stream, 1 m wide, fast flowing through bamboo forest (upper course) and rice fields (lower course), slightly polluted; 9.IV.2001, leg. M. Wang.
- CWBS loc. 427: **Zhejiang Province**, Lishui Prefecture, Longquan City, 40 km S Longquan City, Longquan City - Pingnan Town road, ca. 900 m a.s.l.; small stream, 0.5 m wide, fast flowing through forest, very cold, sediment: siliceous gravel and sand; 10.IV.2001; leg. M. Wang.
- CWBS loc. 428: **Zhejiang Province**, Lishui Prefecture, 32 km S Longquan City, Longquan City - Pingnan Town road, ca. 650 m a.s.l.; small stream, 1 m wide, fast flowing through *Cunninghamia* and bamboo forest, very cold, sediment: siliceous gravel and sand; 10.IV.2001; leg. M. Wang.
- CWBS loc. 429: **Zhejiang Province**, Lishui Prefecture, 30 km S Longquan City, Longquan City - Pingnan Town road, 2 km S Junxi Village, ca. 500 m a.s.l.; small stream, 0.5 m wide, fast flowing through forest (*Cunninghamia* and bamboo), very cold, sediment: siliceous gravel and sand; 11.IV.2001; leg. M. Wang.
- CWBS loc. 430: **Zhejiang Province**, Lishui Prefecture, 26 km S Longquan City, Longquan City - Pingnan Town road, near Shangshe Village, ca. 500 m a.s.l.; small stream, 1.5 m wide, very cold, fast flowing through *Cunninghamia* and bamboo forest, sediment: large boulders, siliceous gravel and sand; 11.IV.2001; leg. M. Wang.
- CWBS loc. 431: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, 50 km SE Kaili, ca. 15 km E Leishan, southern slope of Leigong Shan, near Xiang Shui Yan Hotel, ca. 1000 m a.s.l., 26°22'24"N 108°08'50"E; streams, 2 - 5 m wide, and small, left hand side tributary, 0.5 m wide, moderately fast flowing, mostly unshaded, substrate: gravel and rocks, no organic debris, geology: limestone, sandstone; 12.VI.2001; leg. H. Schillhammer & M. Wang (see Figs. 12, 14).
- CWBS loc. 432: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, 65 km SE Kaili, NE Leishan, eastern slope of Leigong Shan, ca. 2 km WSW Fangxiang Village, ca. 900 m a.s.l., 26°26'06"N 108°16'04"E; River Wunang (left tributary of River Nanmang), ca. 5 - 10 m wide, mostly unshaded (rather warm), many small rapids, sand gravel and rocks, little debris and hardly any submerged dead wood; geology: mainly schystic rock (very soft), crystalline; 13.VI.2001; leg. H. Schillhammer & M. Wang (see Fig. 15).
- CWBS loc. 433: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, ca. 300 m S of pass between Leishan and Fangxiang Village (road to Mogaung Village), ca. 1700 m a.s.l., 26°22'34"N 108°13'24"E; small steep rivulet, in very dark and narrow gorge with dense vegetation; 14.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 434: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, ca. 1 km E of pass on road to Fangxiang Village, ca. 1700 m a.s.l., 26°23'04"N 108°13'02"E; small rivulet on steep slope; 14.VI.2001; leg. H. Schillhammer & M. Wang.

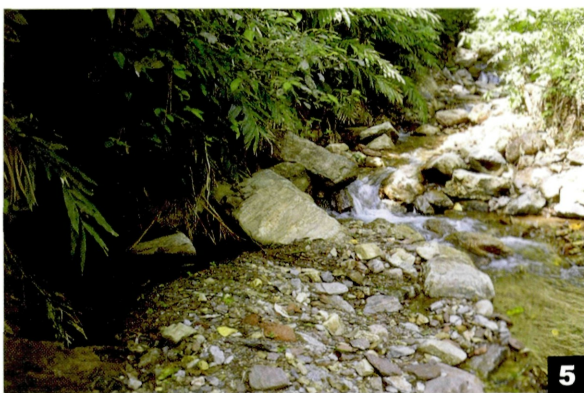
- CWBS loc. 435: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, 1 km E of pass between Leishan and Fangxiang Village, ca. 1700 m a.s.l., 26°23'03"N 108°13'02"E; little waterfall, debris of dead wood and leaves; 15.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 436: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, above Fangxiang Village, ca. 900 m a.s.l., 26°26'35"N 108°16'32"E; River Nanmang, ca. 15 - 20 m wide, variably fast flowing, slightly polluted by surrounding farmland, banks with large-sized stones (up to 50 cm in diameter), fine sand and clay; 16.VI.2001; leg. H. Schillhammer & M. Wang (see Fig. 16).
- CWBS loc. 437: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, ca. 0.5 km W of pass between Leishan and Fangxiang Village, ca. 1750 m a.s.l., 26°22'42"N 108°12'42"E; two small rivulets following small waterfall, shaded by dense vegetation; 17.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 438: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, eastern slope of Leigong Shan, ca. 2 km W of pass between Leishan and Fangxiang Village, ca. 1700 m a.s.l., 26°22'42"N 108°12'00"E; small stream, 0.5 - 1 m wide, same habitat characteristics as CWBS loc. 437; 17.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 439: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, E - slope of Leigong Shan, surroundings of pass between Leishan and Fangxiang, 1700 - 1800 m a.s.l., (pass: 26°22'44"N 108°13'00"E); rainwater puddles; 18.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 440: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, SE Kaili, NE Leishan, southeastern slope of Leigong Shan, close to park gate, ca. 1200 m a.s.l., 26°21'42"N 108°09'36"E; small stream (tributary of River Xiang Shui Yan), ca. 0.3 m wide, shaded, flowing from steep slope; 21.VI.2001; leg. M. Wang.
- CWBS loc. 441: **Guizhou Province**, Qiandongnan Miao Dong Autonomous Prefecture, Leishan County, ca. 1 km below CWBS loc. 440; small stream near road; 21.VI.2001; leg. M. Wang.
- CWBS loc. 442: **Guizhou Province**, Tongren Prefecture, Jiangkou County, ca. 39 km SW Jiangkou, ca. 3.5 km W of Guanhe Village, ca. 600 m a.s.l., 27°32'42"N 108°38'38"E; small stream (left tributary of River Guanhe), ca. 1 - 2 m wide, unshaded, gravel (up to ca. 0.2 m in diameter); geology: limestone, sandstone; 29.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 443: **Guizhou Province**, Tongren Prefecture, Jiangkou County, ca. 50 km SW Jiangkou, Shidu Village, ca. 650 m a.s.l., 27°32'50"N 108°36'27"E; River Guanhe, 10 - 30 m wide, mostly very shallow, warm, riffles; 29.VI.2001; leg. H. Schillhammer & M. Wang.
- CWBS loc. 444: **Guizhou Province**, Tongren Prefecture, Jiangkou County, ca. 50 km SW Jiangkou, surroundings of Shidu Village, ca. 650 m a.s.l., 27°32'50"N 108°36'27"E; rainwater puddles; 29.VI. - 6.VII.2001, leg. H. Schillhammer.
- CWBS loc. 445: **Guizhou Province**, Tongren Prefecture, Jiangkou County, ca. 50 km SW Jiangkou, opposite of Shidu Village, 650 - 680 m a.s.l., 27°32'42"N 108°36'18"E - 27°32'25"N 108°36'10"E; small stream (right tributary of River Guanhe), 0.5 - 1 m wide, partly shaded, flowing through secondary forest and agricultural area; 1./4.VII.2001; leg. H. Schillhammer & M. Wang (see Fig. 13).
- CWBS loc. 446: **Guizhou Province**, Tongren Prefecture, Jiangkou County, upper reaches of CWBS loc. 445, 830 m a.s.l., 27°32'12"N 108°36'12"E; almost completely shaded by dense secondary forest; 4.VII.2001; leg. H. Schillhammer.
- CWBS loc. 447: **Guangdong Province**, Guangzhou City Region, northeastern part of Guangzhou City, Botanical Garden (South China Institute of Botany), guest house (hotel), ca. 30 m a.s.l.; at light; 26. - 27.X.2001; leg. M.A. Jäch.

- CWBS loc. 448: **Guangdong Province**, Guangzhou City Region, northeastern part of Guangzhou City, Botanical Garden (South China Institute of Botany), ca. 30 m a.s.l.; "lotus pond", ca. 40 m², with *Nymphaea tetragona* and *Victoria regia*, margins with grass and forest; 27.X.2001; leg. M.A. Jäch, A. Komarek & M. Wang (see Fig. 19).
- CWBS loc. 449: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, Dinghu Nature Reserve, core area, above Qingyun Temple, ca. 250 m a.s.l.; stream, ca. 1.5 – 2 m wide, flowing through dense primary forest, geology: sandstone; 28.X.2001; leg. M.A. Jäch & A. Komarek (see Fig. 20).
- CWBS loc. 450: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, Dinghu Nature Reserve, below Qingyun Temple, ca. 50 m a.s.l.; River Donggou (= East Valley), ca. 10 m wide, flowing through deep forested gorge with tourist path, geology: sandstone; 28.X.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 451: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, Dinghu Nature Reserve, ca. 300 m downstream from Dinghu dam, ca. 170 m a.s.l.; River Donggou, ca. 5 – 7 m wide, flowing through dense forest, forming small artificial lake with submerged vegetation, geology: sandstone; 29.X.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 452: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, southeastern margin of Dinghu Nature Reserve, near Zhuzhai Village, NE of Dinghu Town, near rock quarry (sandstone), ca. 20 – 40 m a.s.l., 23°11'03"N 112°33'06"E; small, several shallow insolated pools with mud and grass, pools fed by rain water and partly by leaking pipe; 29.X.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 453: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, southeastern margin of Dinghu Nature Reserve, near Zhuzhai Village, NE of Dinghu Town, near rock quarry (sandstone), ca. 20 – 30 m a.s.l., 23°11'03"N 112°33'06"E; stream, ca. 1 – 2 m wide, flowing through deforested valley near rock quarry (see CWBS loc. 452); 29.X.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 454: **Guangdong Province**, Zhaoqing Prefecture, Zhaoqing County, southwestern part of Dinghu Nature Reserve, ca. 50 – 150 m a.s.l.; stream Xigou (= West Valley), ca. 3 – 5 m wide, flowing through gorge with dense primary forest with tourist path, incl. hygroscopic rock near waterfall, geology: sandstone; 30.X.2001; leg. M.A. Jäch & A. Komarek (see Figs. 17, 21).
- CWBS loc. 455: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 50 km E of Fengkai, ca. 5 km W of Qixing, Yulao – Mocun road, Heishiding [Black Stone Mountain Top] Nature Reserve, below Heishiding Nature Reserve head office, ca. 150 m a.s.l., 23°27'36"N 111°54'36"E; River Qixing (= Seven Stars), ca. 10 – 15 m wide, flowing through deep valley with more or less natural forest, incl. hygroscopic rock at shore and mouth of small tributary; 31.X. + 2.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 456: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 50 km E of Fengkai, ca. 5 km W of Qixing, Yulao – Mocun road, Heishiding (= Black Stone Mountain Top) Nature Reserve, ca. 300 – 400 m a.s.l., 23°27'04"N 111°53'53"E; several streams, ca. 1 – 2 m wide, flowing through dense primary forest; 1.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 457: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 50 km E of Fengkai, ca. 5 km W of Qixing, Yulao – Mocun road, Heishiding (= Black Stone Mountain Top) Nature Reserve, ca. 300 – 400 m a.s.l., 23°27'04"N 111°53'53"E; various pools along forest road near CWBS loc. 456; 1.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 458: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 60 km E of Fengkai, ca. 9 km E of Heishiding Nature Reserve head office, ca. 4 km E of Qixing, Yulao – Mocun road, ca. 230 m a.s.l., 23°26'36"N 111°58'10"E; River Qixing, ca. 8 – 10 m wide, flowing through degraded forest and cultivated land; 1.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 459: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 60 km E of Fengkai, ca. 6 km NE of Heishiding Nature Reserve head office, near Sandong Village, ca. 300 – 320 m a.s.l.; stream (right tributary of CWBS loc. 460), ca. 2 – 3 m wide, flowing through valley with degraded forest and cultivated land; 2.XI.2001; leg. M.A. Jäch & A. Komarek.

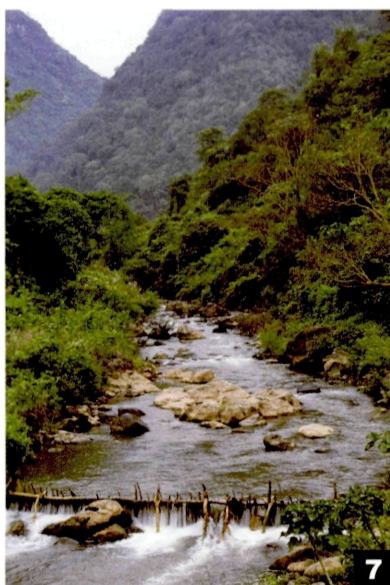
- CWBS loc. 460: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 60 km E of Fengkai, ca. 6 km NE of Heishiding Nature Reserve head office, near CWBS loc. 459, ca. 300 m a.s.l.; River Donguang, ca. 5 - 8 m wide, flowing through valley with degraded forest and cultivated land; 2.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 461: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 60 km E of Fengkai, ca. 11 km E of Heishiding Nature Reserve head office, ca. 6 km E of Qixing, Yulao – Mocun road, ca. 230 m a.s.l.; River Qixing, ca. 8 - 10 m wide, furcating into two branches, below mouth of a rather large right tributary (ca. 4 m wide), flowing through degraded forest and cultivated land (paddy fields); 2.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 462: **Guangdong Province**, Zhaoqing Prefecture, Fengkai County, ca. 60 km E of Fengkai, ca. 11 km E of Heishiding Nature Reserve head office, ca. 6 km E of Qixing, along Yulao – Mocun road, close to CWBS loc. 461, ca. 230 m a.s.l.; springfed, hygroscopic rock, partly with small rock pools; 2.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 463: **Guangdong Province**, Zhaoqing Prefecture, Huaiji County, ca. 35 km NE of Huaiji, Huaiji – Yangshan road, near Sanmianliang Village, ca. 130 m a.s.l., 24°00'25"N 112°26'09"E; River Madi, ca. 5 – 10 m wide, flowing through swampy plain and forested valley, shore with gravel bank and numerous flat muddy pools with grassy edges; 3.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 464: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, mountain pass (summit: ca. 700 m), Huaiji – Yangshan road, ca. 530 m a.s.l.; torrent, ca. 2 – 3 m wide, with large boulders, on steep slope, flowing through degraded primary forest; 3.XI.2001; leg. M.A. Jäch, A. Komarek & M. Wang.
- CWBS loc. 465: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Chengjia Nature Reserve, Yao Shan, ca. 25 km NE of Chengjia Village, ca. 640 m a.s.l., 24°51'51"N 112°54'43"E; stream (left tributary of River Chengjia), ca. 2 – 3 m wide, with large boulders and waterfalls, on steep slope, flowing through degraded primary forest; 4.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 466: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Chengjia Nature Reserve, Yao Shan, ca. 30 km NE of Chengjia Village, ca. 800 m a.s.l., 24°52'11"N 112°56'45"E; River Chengjia, ca. 5 - 12 m wide, with large boulders and gravel, flowing through degraded primary forest; 4.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 467: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Chengjia Nature Reserve, Yao Shan, below peak of Shikengkong Mountain, ca. 1750 m a.s.l.; concrete well; 4.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 468: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Chengjia Nature Reserve, Yao Shan, ca. 35 km NE of Chengjia Village, near Taipingdong Village, ca. 950 m a.s.l., 24°53'03"N 112°57'37"E; River Chengjia, ca. 8 - 10 m wide, flowing through cultivated land, margins with grass and undercut banks; 4.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 469: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Yao Shan, ca. 25 km E of Chengjia Village, ca. 450 m a.s.l., 24°45'48"N 112°53'56"E; river, ca. 5 - 7 m wide, with boulders and gravel, flowing through valley with partly degraded primary forest; 5.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 470: **Guangdong Province**, Shaoguan Prefecture, Yangshan County, Nanling National Park, Yao Shan, mountain pass (summit: ca. 1250 m), Chengjia – Ruyuan road, ca. 30 km E of Chengjia Village, ca. 650 m a.s.l., 24°45'16"N 112°54'00"E; small stream, ca. 1 m wide, densely shaded, on steep slope (with waterfall), flowing through degraded primary forest; 5.XI.2001; leg. M.A. Jäch & A. Komarek.

- CWBS loc. 471: **Guangdong Province**, Shaoguan Prefecture, Ruyuan County, Chengjia – Ruyuan road, ca. 40 km E of Chengjia Village, near Tianluokeng Village, ca. 550 m a.s.l.; stream, ca. 2 - 3 m wide, margins partly with grass, strongly meandering, flowing through cultivated land in small plain surrounded by pine forest; 5.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 472: **Guangdong Province**, Shaoguan Prefecture, Ruyuan County, Chengjia – Ruyuan road, ca. 40 km SW of Ruyuan, ca. 550 m a.s.l., 24°40'36"N 113°05'16"E; flat, muddy pools, partly used as fish ponds, with various freshwater plants; 5.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 473: **Guangdong Province**, Shaoguan City Region, center of Shaoguan City, market near Fengdu road; plastic trays with living water beetles for sale; 6.XI.2001; leg. M.A. Jäch & A. Komarek (see Fig. 18).
- CWBS loc. 474: **Guangdong Province**, Shaoguan Prefecture, Ruyuan County, Ruyuan, ca. 50 m a.s.l., 24°45'03"N 113°18'38"E; river, polluted, ca. 50 m wide, margins with muddy pools and grass; 6.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 475: **Guangdong Province**, Shaoguan City Region, Shaoguan – Ruyuan road, ca. 20 km W of Shaoguan, near Madu Village, ca. 30 m a.s.l., 24°44'28"N 113°25'38"E; River Shezu, ca. 5 - 10 m wide, margins with wide gravel banks and flat muddy pools; 6.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 476: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Chebaling Nature Reserve, ca. 55 km SE of Shixing, ca. 7 km E of Chebaling Village, ca. 340 m a.s.l., 24°42'21"N 114°14'17"E; River Shui, ca. 7 - 10 m wide, flowing through dense primary forest; 7.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 477: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Chebaling Nature Reserve, ca. 60 km SE of Shixing, ca. 2 km E of Chebaling Village, ca. 450 m a.s.l., 24°41'47"N 114°11'57"E; stream (right tributary of River Shui), 1 – 2 m wide, flowing through dense primary forest; 7.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 478: **Guangdong Province**, Shaoguan Prefecture, Shixing County, ca. 5 km WSW of Chebaling Village, ca. 2 km NE of Jiangciao Village, ca. 330 m a.s.l.; stream, ca. 1 m wide, flowing through dense primary forest; 7.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 479: **Guangdong Province**, Shaoguan Prefecture, Shixing County, ca. 10 km SW of Chebaling Village, at Jiangciao Village, Chebaling – Siqian road, ca. 270 m a.s.l., 24°41'11"N 114°07'17"E; several small pools with mud and aquatic vegetation, in meadow, close to river (CWBS loc. 480); 7.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 480: **Guangdong Province**, Shaoguan Prefecture, Shixing County, ca. 10 km SW of Chebaling Village, at Jiangciao Village, Chebaling – Siqian road, ca. 270 m a.s.l., 24°41'11"N 114°07'17"E; river, ca. 5 – 7 m wide, margins with gravel banks and grass; 7.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 481: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Shixing – Chebaling road, ca. 25 km SE of Shixing, ca. 2 km NW of Shuicheng Village, ca. 150 m a.s.l., 24°50'23"N 114°14'03"E; River Shui, ca. 8 - 15 m wide, flowing through valley with secondary vegetation; 8.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 482: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Shixing – Chebaling road, ca. 45 km SE of Shixing, ca. 30 km NE of Chebaling Village, ca. 200 m a.s.l., 24°47'28"N 114°15'56"E; stream (right tributary of River Shui), ca. 2 - 3 m wide, flowing through primary forest; 8.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 483: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Chebaling Nature Reserve, ca. 55 km SE of Shixing, ca. 7 km E of Chebaling Village, ca. 300 m downstream from CWBS loc. 476, ca. 340 m a.s.l.; River Shui, ca. 7 - 10 m wide, flowing through dense primary forest; 8.XI.2001; leg. M.A. Jäch & A. Komarek.

- CWBS loc. 484: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Huashi Shan, Siqian - Shaoguan road, ca. 40 km W of Siqian, near Zhongxintao Village, ca. 480 m a.s.l., 24°40'28"N 113°56'33"E; stream, ca. 2 m wide, flowing through degraded forest and paddy fields; 8.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 485: **Guangdong Province**, Shaoguan Prefecture, Shixing County, Huashi Shan, Siqian - Shaoguan road, ca. 10 km NW of Zhongxintao Village, near Longdoushe Forest Farm, ca. 480 m a.s.l., 24°51'59"N 113°54'34"E; small river, ca. 3 m wide, including small cascading tributary (ca. 1 – 2 m wide), flowing along road and through degraded forest; 8.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 486: **Guangdong Province**, Guangzhou City Region, northeastern part of Guangzhou City, Bei Hai Seafood Restaurant near Botanical Garden (South China Institute of Botany); plastic trays containing living water beetles used as food; 9.XI.2001; leg. M.A. Jäch & A. Komarek.
- CWBS loc. 487: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 34 km E of Zengcheng, Luofu Shan Nature Reserve, near park gate, ca. 180 m a.s.l.; small spring in steep broadleaf forest; 10.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 488: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 37 km E of Zengcheng, near Luofu Shan Nature Reserve, ca. 200 m a.s.l., 114°03'27"E 23°16'33"N; small stream, 1 – 2 m wide, flowing through degraded forest; 10.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 489: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 38 km ENE of Zengcheng, near Luofu Shan Nature Reserve, ca. 200 m a.s.l., 23°16'37"N 114°03'19"E; small stream, 1 – 2 m wide, flowing through degraded forest; 11.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 490: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 40 km ENE of Zengcheng, near Xialang Village, ca. 140 m a.s.l., 23°17'10"N 114°04'02"E; small stream, ca. 1 m wide, flowing through bamboo forest and agricultural land; 11.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 491: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 40 km ENE of Zengcheng, near Xialang Village, close to CWBS loc. 490, ca. 140 m a.s.l., 23°17'13"N 114°04'07"E; muddy pools in agricultural land; 11.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 492: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 40 km ENE of Zengcheng, near Xialang Village, foot of Luofu Shan, close to CWBS loc. 491, ca. 170 m a.s.l., 23°17'12"N 114°03'42"E; stream, 4 – 6 m wide, flowing through degraded forest, with large granite boulders; 11.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 493: **Guangdong Province**, Huiyang Prefecture, Boluo County, ca. 40 km ENE of Zengcheng, near Xialang Village, foot of Luofu Shan, close to CWBS loc. 492, ca. 140 m a.s.l., 23°17'15"N 114°04'06"E; small muddy pools in agricultural land; 11.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 494: **Guangdong Province**, Guangzhou City Region, Longmen County, ca. 45 km N of Zengcheng, ca. 4 km W of Nankunshan Town, Nankun Shan, ca. 460 m a.s.l., 23°38'09"N 113°32'40"E; river, 10 - 12 m wide, flowing through degraded forest; 12.XI.2001; leg. A. Komarek & M. Wang.
- CWBS loc. 495: **Guangdong Province**, Guangzhou City Region, Longmen County, ca. 45 km N of Zengcheng, ca. 4 km N of Nankunshan Town, Nankun Shan, ca. 500 m a.s.l., 23°37'28"N 113°50'10"E; small stream, ca. 1 m wide, flowing through bamboo forest; 13.XI.2001; leg. M. Wang.
- CWBS loc. 496: **Guangdong Province**, Guangzhou City Region, Longmen County, ca. 45 km N of Zengcheng, ca. 7 km N of Nankunshan Town, Nankun Shan, near Huazhu Village, ca. 600 m a.s.l., 23°36'47"N 113°35'52"E; stream, ca. 2 m wide, flowing through bamboo forest; 13.XI.2001; leg. M. Wang.



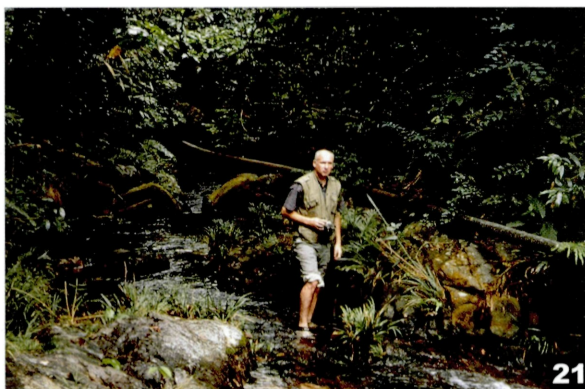
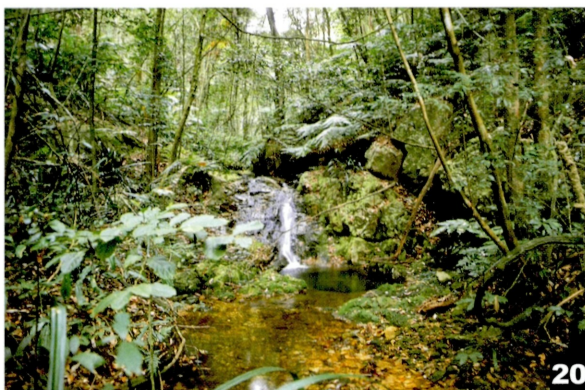
Figs. 2 - 6: YÜNNAN: China Water Beetle Survey localities; 2) CWBS loc. 350; 3) CWBS loc. 357 (M.A. Jäch); 4) CWBS loc. 348 (M. Wang in foreground, H. Schönmann in background); 5) CWBS loc. 354 (note shaded residual pool on left side); 6) CWBS loc. 356. [Photographs by M.A. Jäch (2, 4 - 6) and H. Schönmann (3)].



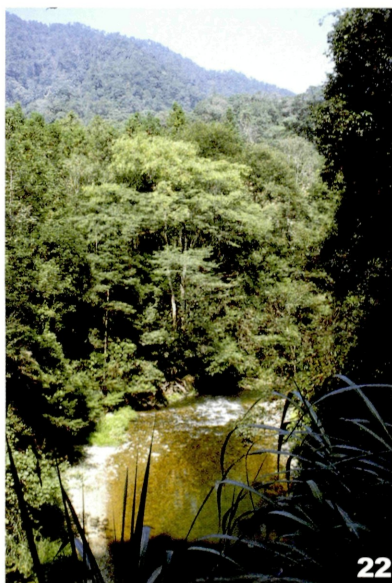
Figs. 7 - 11: YÜNNAN: China Water Beetle Survey localities; 7) CWBS loc. 361; 8) CWBS loc. 364; 9) CWBS loc. 360 (Y. Wei, collecting beetles from interstitial space of gravel bank); 10) CWBS loc. 377; 11) CWBS loc. 410. [Photographs by M.A. Jäch (7 - 10) and H. Schönmann (11)].



Figs. 12 - 16: GUIZHOU: China Water Beetle Survey localities; 12) CWBS loc. 431; 13) CWBS loc. 445; 14) CWBS loc. 431; 15) CWBS loc. 432; 16) CWBS loc. 436 (M. Wang). [Photographs by H. Schillhammer].



Figs. 17 - 21: GUANGDONG: China Water Beetle Survey localities; 17) CWBS loc. 454 (hygropetric locality, M.A. Jäch); 18) CWBS loc. 473 (collecting *Hydrophilus* at Shaoguan market, M.A. Jäch); 19) CWBS loc. 448 (A. Komarek and M. Wang - standing); 20) CWBS loc. 449; 21) CWBS loc. 454. [Photographs by M.A. Jäch (19, 20) and A. Komarek (17, 18, 21)].



Figs. 22 - 26: GUANGDONG: China Water Beetle Survey localities; 22) CWBS loc. 476; 23) CWBS loc. 478; 24) CWBS loc. 455 (A. Komarek); 25) CWBS loc. 456; 26) CWBS loc. 475. [Photographs by M.A. Jäch].

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Dr. Manfred A. JÄCH

Naturhistorisches Museum, Burgring 7, A - 1014 Wien, Austria (manfred.jacch@nhm-wien.ac.at)

Prof. Lanzhu Ji

Institute of Applied Ecology, Academia Sinica, P.O.Box 417, Shenyang 110015, China

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