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Revision of the genus *Thermistis* Pascoe 1867, with descriptions of three new species (Coleoptera: Cerambycidae: Lamiinae: Saperdini)

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Abstract. The genus *Thermistis* Pascoe 1867 is revised. *T. croceocincta conjunctesignata* Rondon & Breuning 1971 is upgraded to a species and newly recorded from China and Myanmar. *T. xanthomelas* Holzschuh 2007 is newly recorded from Vietnam, Laos and Myanmar. *T. sulphureonotata* Pu 1984 is newly recorded from Vietnam and Laos. Three new species are described from China: *T. hainanensis* Lin & Yang **n. sp.** from Hainan Island, *T. kaiyuni* Chou & Kurihara **n. sp.** from Taiwan Island and *T. cheni* Lin & Chou **n. sp.** from Yunnan and Sichuan provinces. Photographs of habitus and terminalia and a key to the eleven valid species of *Thermistis* are presented.

Résumé. Révision du genre *Thermistis* Pascoe 1867, avec les descriptions de trois nouvelles espèces (Coleoptera : Cerambycidae : Lamiinae : Saperdini). Le genre *Thermistis* Pascoe 1867 est révisé. *T. croceocincta conjunctesignata* Rondon & Breuning 1971 est élevé au rang d'espèce et cité de Chine et Myanmar. *T. xanthomelas* Holzschuh 2007 est cité du Vietnam, Laos et Myanmar. *T. sulphureonotata* Pu 1984 est cité du Vietnam et Laos. Trois nouvelles espèces sont décrites de Chine : *T. hainanensis* Lin & Yang **n. sp.** de l'île d'Hainan, *T. kaiyuni* Chou & Kurihara **n. sp.** de l'île de Taiwan et *T. cheni* Lin & Chou **n. sp.** des provinces du Yunnan et du Sichuan. Toutes les espèces ainsi que les genitalia sont figurées. Une clef des onze espèces est proposée.

Keywords: New status, distribution, Oriental region.

The saperdine genus *Thermistis* was established by Pascoe (1867) on the basis of an Indian species, *Lamia croceocincta* Saunders 1839. It has large body and brightly colored distinctive features and there were few misidentifications. Up to now, 7 species and 1 subspecies have been described from the Oriental geographic region, and most of the species except for 1 subspecies from Laos were recorded from China including Hainan and Taiwan (Löbl & Smetana 2010).

In the present paper, we will describe 3 new species, of which *T. hainanensis* Lin & Yang **n. sp.** and *T. cheni* Lin & Chou **n. sp.** are found to be new to science based on the first author's systematic study of Saperdini from China. At the same time, Wen-I Chou and Takashi Kurihara have discovered a new species from Taiwan, herein named *T. kaiyuni* Chou & Kurihara **n. sp.** after the collector Kaiyun Chang.

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Further, *T. croceocincta* subsp. *conjunctesignata* Rondon & Breuning 1971 is upgraded to an independent species and is newly recorded from Yunnan of China, Shan state and Kachin prov. of Myanmar. *T. croceocincta* (Saunders 1839) is newly recorded from Anhui and Honkong of China. *T. nigromacula* Hua 1992 is newly recorded from Yunnan of China and Lao Cai prov. of Vietnam. *T. xanthomelas* Holzschuh 2007 is newly recorded from Fujian, Hainan and Yunnan of China, Tonkin of Vietnam, Houa Phan prov. and Xieng Khouang prov. of Laos, Shan state and Kachin prov. of Myanmar. *T. sulphureonotata* Pu 1984 is newly recorded from Houa Phan prov. of Laos and Tam Dao of Vietnam. *T. rubromaculata* Pu 1984 is newly recorded from Guizhou of China.

As a result, this genus includes 11 species, all distributed in Oriental region.

Material and Methods

The dissection methods, measurements and mapping methods followed Lin *et al.* (2009).

[NCA]: No Coordinates Available.

Materials are deposited in the following institutions, museums or collections; abbreviations as shown in the text: BMNH

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The Natural History Museum, London, UK [formerly British Museum (Natural History)]; BPBM Bernice P. Bishop Museum, Honolulu, USA; CASJ Collection of Akiko Saito, Chiba, Japan; CBWX Collection of Wenxuan Bi, Shanghai, China; CCCC Collection of Changchin Chen, Tianjin, China; CCH Collection of Carolus Holzschuh, Villach, Austria; CJM Collection of Ming Jin, Shanghai, China; CKYC Collection of Kaiyun Chang, Taiwan; CLH Collection of Hui Lu, Beijing, China; CMH Collection of Michiaki Hasegawa, Toyohashi, Japan; CNO Collection of Nobuo Ohbayashi, Miura, Japan; CPS Collection of Carlo Pesarini and Andrea Sabbadini, Milano, Italy; CTK Collection of Takashi Kurihara, Tsukuba, Japan; CTN Collection of Tatsuya Niisato, Tokyo, Japan; CWD Collection of Dong Wen, Qingdao, Shandong, China; CWIC Collection of Wen-I Chou, Taiwan; CWSL Collection of Wenhsin Lin, Taiwan; CYO Collection of Yoshiki Okahana, Kagoshima, Japan; CZCH Collection of Chenghui Zhan, Guangdong, China; EUMJ Ehime University Museum, Matsuyama, Japan; HBU Hebei University, Hebei, China; IRSNB Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium; IZAS Institute of Zoology, Chinese Academy of Sciences, Beijing, China; MHNG Muséum d'Histoire Naturelle de Genève, Genève, Switzerland; MHNL Muséum d'Histoire Naturelle, Lyon, France; NMNH: National Museum of Natural History (Smithsonian Institution), Washington, USA; NMNST National Museum of Natural Science, Taiwan; MNHN Muséum National d'Histoire Naturelle, Paris, France; NMB Naturhistorisches Museum (Museum Frey, Tutzing), Basel, Switzerland; OMNH Osaka Museum of Nature History, Osaka, Japan; OUMNH University Museum of Natural History, Oxford, UK; SHEM Shanghai Entomological Museum, Chinese Academy of Sciences, Shanghai, China; SYSU Sun-Yatsen University, Guangzhou, China.

Results

Thermistis Pascoe 1867

Thermistis Pascoe 1867: 438, note. Type species: *Lamia croceocincta* Saunders 1839. Original designation.

Thermistis: Gressitt 1951: 562.- Pesarini & Sabbadini 1999: 67.

Description. Medium to large sized (14–32 mm long), body length slightly less than three times of humeral width. Head narrower than prothorax, provided with a median longitudinal furrow extending from near basal margin of frons to occiput; frons usually longer than broad (male) or as broad as long (female), eyes deeply concave, not divided. Antennae shorter to longer than body, scape slightly expanded, without ridge, the third antennomere always the longest, the fourth longer than scape. Pronotum broader than long, provided with conical lateral tubercles, disc provided with discal tubercles and punctures or short ridges. Elytra wider than prothorax, widest across humeri, gradually narrowed apically, without lateral carinae, rounded or slightly truncated to emarginated apically. Procoxal cavity almost closed or slightly opened posteriorly; anterior width of metepisternum more than twice as wide as posterior width, middle tibiae without oblique groove, hind femur reaching third or fourth abdominal segment, the first hind tarsal segment shorter than the following two combined. Both male and female with simple claws.

Male terminalia: Apex of tergite VIII widely truncated to slightly emarginated, lateral lobes stout to moderately slender (length/width = 2.0–3.2), ringed part elbowed in the widest portion, converging; median lobe plus median struts slightly curved, subequal to or slightly longer than tegmen in length, apex of ventral plate narrowly rounded to narrowly truncated, median foramen elongated; internal sac short, less or subequal to twice of the whole median lobe in length, without basal armature, with 3 rod-like sclerites (middle one usually subseparated) and sometimes with another two or more pieces of sclerites.

Female terminalia: spermathecal capsule composed of a heavily sclerotized apical lobe (usually curved, except *T. nigromacula*) and a much thinner stalk, spermathecal duct longer than spermathecal capsule, spermathecal gland with a sclerotized ring at the base, tignum much shorter than abdomen in ventral view (less than 1/2).

Diagnosis. Differs from *Glenida* Gahan by elytron without lateral carina and with dense pubescence.

Distribution. Centre and South of China, Vietnam, Laos, Thailand, Myanmar, India, Himalaya.

Remarks. This genus includes 11 species.

Thermistis croceocincta (Saunders 1839) (figs. 1–8, 65)

Lamia croceocincta Saunders 1839: 178, pl. 16, fig. 6 (E. India). [OUMNH]

Thermistis croceocincta: Pascoe 1867: 439, note.

Thermistis apicalis Pic 1923: 14 (Tonkin). [MNHN]

Termistis (sic) *croceocincta*: Nara & Yu 1992: 132, figs 1.3, 1.4, 1.5.

Thermistis croceocincta m. *apicalis:* Breuning 1966: 729

Thermistis croceocincta apicalis: Nara & Yu 1992: 133, figs 1.6, 1.7 (N. Vietnam, N. Thailand).

Thermistis croceocincta: Gressitt 1951: 562.- Pesarini & Sabbadini 1999: 67.- Breuning 1966: 729.- Hua 2002: 235 [Catalogue].- Hua, Nara, Saemulson & Lingafelter 2009: 119, figs. 1380 [Fauna].

Thermistis croceocincta croceocincta: Löbl & Smetana 2010: 332.

? *Thermistes* (sic) *croceocincta* v. *rufovasalis* Pic 1950, Echange, 66 (522): 13 (Tonkin). [coll. Perrot] {type unfound, may be another species}.

Thermistes croceocincta m. *rufovasalis*: Breuning 1966: 729.

Supplementary description. Male: length: 14.0–23.5 mm, humeral width: 4.8–7.8 mm. Female: length: 18.0–23.5 mm, humeral width: 6.0–8.0 mm. Antennae longer than body; antennomere ratio: male: 24:6:34:32:26:25:24:23:22:20:20; female: 25:5:33:30:23:22:21:20:19:18:18. Elytral apex slightly truncated, with a very minute and scarcely perceptible tooth at each angle.

Male terminalia (figs. 5–6). Tegmen length about 3.2 mm; lateral lobes rather straightly tapered from middle to narrowly rounded apices, each about 0.6 mm long and 0.2 mm wide, ventral base of each lobe with a finely haired curved ridge; median lobe plus median struts slightly curved, hardly longer than tegmen (33:32); the median struts subequal to one half of the whole median lobe in length; ventral plate roundly tapered to weakly projected apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites and 2 short pieces (fig. 5r), of which paired ones are long baculiform, about 1.4 times as long as the short one; the short one with dilated and subseparated base; 2 longer rods each about 2.3 mm, much shorter than tegmen. Tergite VIII (figs. 6a & 6c) trapezoidal, apex widely truncated, provided with median long setae along apical and lateral sides.

Female genitalia (figs. 7–8): Spermathecal capsule with apical lobe strongly curved. Tignum much shorter than abdomen. In our observation, tignum 4.5 mm for an adult with a 10.2 mm abdomen in ventral view.

Distribution. China (Shaanxi, Hubei, Anhui (**new province record**), Zhejiang, Jiangxi, Hunan (Hua 1992; 2002), Fujian, Guangdong, Hongkong (**new area record**), Hainan, Guangxi, Sichuan, Guizhou, Yunnan), Vietnam, Thailand, India, Himalaya.

Type specimen examined. Syntypes (of *Lamia croceocincta* Saunders), 2 males, E. India, Assam (OUMNH, ex the collection of S. Rucker, Esq., Type COL: 1873, one with a white label "asemnis", examined through pictures taken by Laurence Livermore). Type (of *Thermistis apicalis* Pic), ♀, Ht. Tonkin [20°38'N 105°26'E] (MNHN, ex Coll. M. Pic).

Other specimens examined. Anhui: 1 ♂, Huangshan [30°16'N 118°08'E], 19.VI.1936 (IZAS). **Zhejiang:** 2 ♂♂, Tianmushan [30°20'N 119°25'E], 19.VI.1936 or 27.VIII.1936 (IZAS); 2 ♀♀, Tianmushan [30°20'N 119°25'E], 18.VII or 9.VIII.1937 (IZAS); 1 ♂, Tianmushan nature reserve [30°20'N 119°25'E], 25–27.VI.2009, coll. Ming Jin (CJM); 1 ♂, Xitianmushan [30°20'N 119°24'E], alt. 1,100 m, 13.VII.2008, coll. Yigang Wang (CBWX); 1 ♀, Lishuishi, Baixueshan [28°27'N 119°55'E], alt. 1,100 m, 6.VII.2001, coll. Y. F. Hsu (CWIC); 1 ♀, Guangyuan county, Baishanzu [27°45'N 119°12'E], alt. 1,050 m, 22.VII.1963, coll. Gentao Jin (SHEM). **Jiangxi:** 1 ♀, Mt. Lushan [29°40'N 115°59'E], 20.VI.1979 (IZAS); 1 ♀, Ku-ling (Guling) [29°34'N 115°57'E] (IZAS). **Hunan:** 1 ♂, Yizhang [25°24'N 112°57'E], VII.1979 (IZAS). **Fujian:** 1 ♂, Nanping, Mangdangshan, 6.VI.2009, coll. Pengyu Liu (CWIC); 1 ♀, Chong'an, Xingcun, Guadun [27°44'N 117°38'E], alt. 950–1,210 m, 20.VIII.1960, coll. Yong Zou (IZAS); 1 ♀, Mts. Wuyishan, Tongmu [27°45'N 117°41'E], 20.VII.2003, coll. Guodong Ren & Ming Bai (HBU); 1 ♀, Wuyishan nature reserve [27°49'N 117°50'E], 10–15.VII.2009, light trap, coll. Ming Jin (CJM). **Guangdong:** 1 ♀, Canton [23°08'N 113°16'E] (IZAS); 1 ♂, Guangzhou, Lingnan campus [23°06'N 113°18'E], 28.IV.1937 (SYSU); 2 ♀♀, Nanling, Diantashan [24°55'N 113°01'E], 18.VI. 2006, coll. Z.-J. Lu (CCCC); 1 ♂, Nanling Nature Reserve [24°55'N 113°01'E], 15.VI.2010, light trap, coll. Chenghui Zhan (CZCH); 1 ♀, Lianxian, Dadongshan [24°46'N 112°41'E], 20.V.1997, coll. Xiaolong Zhang (SYSU); 1 ♀, same data but 2.VII.1995, coll. Fenglong Jia (SYSU); 1 ♂, same data but 5.VI.2001, coll. Xiongwei Mai; 1 ♀, same data but 6.VI.2001, coll. Lixia Tang; 1 ♂ 1 ♀, same data but 4.VI.1998, coll. Qisheng Peng; 1 ♀, same data but 2.VI.1998, coll. Jinglian Liu; 1 ♂, same data but 30.VI.1993, coll. Zhiming Chen; 1 ♀, same data but 26.V.1997, coll. Rongjie Yu; 1 ♀, same data but coll. Ji Zheng; 1 ♀, same data but 6.VII.1997, coll. Zhijiang Su; 1 ♀, Lianxian, Tanling [24°58'N 112°39'E], 12.VII.1992, coll. Jun Liu (SYSU); 1 ♀, same data but 12.III.1992, coll. Xinyu Ai; 1 ♂, same data but 12.VII.1992, coll. Meibao Zuo; 1 ♀, Ruyuan, Tianjingshan [24°37'N 113°04'E], 23.V.1974, coll. Zhongxin Zheng (SYSU); 1 ♀, same data but VI.1974, coll. Huiming Wu (SYSU). **Hongkong:** 1 ♂ 1 ♀, Hongkong [23°07'N 98°41'E] (NMB, ex Coll. Frey). **Hainan:** 2 ♀♀, Mt. Jianfengling [18°44'N 108°52'E], 1–11.VIII.2007 (one in CTK, one in IZAS, ex CTK). **Guangxi:** 1 ♂, Jiuxiu, Shengtangshan [23°59'N 110°06'E], alt. 900–1,900 m, 8.VI.2000, coll. Chaodong Zhu (IZAS); 1 ♂ 2 ♀♀, Jinxiu county, Dayaoshan [24°08'N 110°11'E], VII.2008 (CCCC); 1 ♀, Yaoshan [24°08'N 110°11'E], coll. S.Y.T. (IZAS); 1 ♂, Miaoershan, Jiuniutang [22°55'N 110°24'E], alt. 1,150 m, 7.VII.1985, coll. Subai Liao (IZAS); 1 ♀, Longsheng, Hongtan [25°36'N 109°57'E], alt. 900 m, 11.VI.1963, coll. Yongshan Shi (IZAS); 2 ♂♂, Nanning, Wuming county, Mt. Damingshan [23°24'N 108°28'E], alt. 1200 m, 22.VI.2011, light trap, coll. Huihua Zeng, Yanquan Lu (CWD); 1 ♀, same data but 4.VII.2011, coll. Yanquan Lu (CWD); 1 ♀, same data but 6.VIII.2011, coll. Rui Chen (IZAS). **Sichuan:** 3 ♂♂, Mt. Emeishan [29°31'N 103°20'E], 9–10.VI.1955, coll. Keren Huang & Gentao Jin (IZAS); 1 ♂, Chongqing, Nanchuan, N. Jinfoshan, Baiguolin shanzhuang [29°01'N 107°07'E], 21.VII.2008, by light trap, coll. Wenhsin Lin (CWSL). **Guizhou:** 1 ♀, Leishan, Taojiang [26°16'N 108°08'E], alt. 1,000–1,890 m, 6.VII.1988, coll. Shuyong Wang (IZAS); 1 ♀, Leishan, Taojiang [26°16'N 108°08'E], alt. 870–1,100 m, coll. Shuyong Wang (IZAS); 2 ♂♂ 1 ♀, Jiangkou, Fanjinshan [27°54'N 108°42'E], alt. 1,775 m, 14–16.VII.2009, coll. Wenhsin Lin (CCCC, with 1 ♂ and 1 ♀ in IZAS); 1 ♂, Fanjingshan [27°54'N 108°42'E], alt. 1,650 m, 4.VII.2008, coll Wenhsin Lin (CWSL). **Yunnan:** 1 ♀, Jinping, Changpotou [22°57'N 103°18'E], alt. 1,200 m, 23.V.1956, coll. Keren Huang (IZAS); 1 ♂, Yunnansen [NCA], X–XI.1902, coll. P. Guerry Roanne (IRSNB); 1 ♂, Yunnansen [NCA], X-XI.1902 (MHNG); 1 ♂, Yunnan, Pe Yen Tsin [NCA] (MHNL, ex Coll. Lepesme, 2002); 12 ♂♂ 6 ♀♀, Jinping, Maandi, Biaoshuiyan [22°44'N 103°29'E], alt. 1,350 m, 13–18.V.2010, coll. Wenhsin Lin & Xiaodong Yang (CCCC, with 1 ♂ and 1 ♀ in IZAS); 2 ♂♂ 1 ♀, Jinping, Maandi, Luobodi [22°45'N 103°30'E], alt. 1,350 m, 16–17.V.2010, coll. Xiaodong Yang (CCCC); 1 ♂, Pingbian, Daweishan, Honghezhou [22°55'N 103°41'E], 20.VI.2005, coll. Y. F. Shu (CCCC).

Vietnam: 1 ♀, Tonkin, Dong-Dang [20°39'N 105°29'E], IV.1903 (IRSNB); 1 ♂, same data but 15.VII (IRSNB); 7 ♂♂ 2 ♀♀, Tonkin [20°38'N 105°26'E] (MNHN, ex Coll. R. Oberthür, 1952); 1 ♀, Tonkin [20°38'N 105°26'E], 1915.V, coll. R. Vitalis de Salvaza (MHNG, ex Coll. G. Junod);1 ♀, Tonkin, Hoabinh [20°41'N 105°20'E] (MHNG, ex Coll. G. Junod); 2 ♂♂, Vinh Phu prov. Tam Dao [21°30'N 105°36'E], VI–VII.1992, coll. native collector (EUMJ, "Genitalia 27"); 2 ♀♀, same data but 27.VII–2.VIII.1992, coll. N. Ohbayashi (EUMJ); 1 ♀, same data but 4–27.V.1994 (CMH); 1 ♀, same data but 20–23.V.1995, coll. M. Satô (EUMJ); 1 ♀, same data but 7.IV–1.V.1996 (CMH); 2 ♂♂ 1 ♀, same data but alt. 930m, 1–7.V.1996, coll. Y. Arita (EUMJ); 1 ♀, same data but VI.1997 (CTK); 1 ♀, same data but 15–30.V.1998 (CTK); 1 ♀, same data but 16.VI.1998 (CTK) ; 1 ♀, same data but V.1999 (CASJ); 1 ♀, same data but 6.VII.1999 (CTK); 1 ♀, N. Vietnam, Sapa [21°59'N 106°48'E], VII.2006 (CTK); 1 ♀, North Vietnam, Cao Bang Prov., North Pia Oac [22°40'N 105°52'E], V.1999 (CTK, with markings strikingly similar to *T. hainanensis*).

India: 1 ♀, India, Sikkim [27°44'N 88°38'E] (IRSNB, ex Coll. Fruhstorfer); 1 ♀, Assam, Shillong [25°34'N 91°53'E] (IRSNB, ex Coll. Schramm); 4 ♂♂ 5 ♀♀, Assam Reg. De Shillong (MNHN, ex Coll. R. Oberthür, 1952); 1 ♂, 1 ♀, Assam [26°13'N 92°56'E] (IRSNB); 1 ♂, Assam (MHNL, ex Coll. Lepesme, 2002); 1 ♂, Assam, Khasia Hills [25°35'N 91°38'E] (IRSNB); 2 ♂♂ 4 ♀♀, Khasia Hills (MNHN, ex Musaeo W. Rothschild, 1899); 1 ♂, Assam, Khasi (NMB, ex Coll. Frey).

Himalaya: 1 ♂ 8 ♀♀, Hymalaya [NCA] (IRSNB, ex Coll. Nonfried); 2 ♀♀, Himalaya [NCA] (MHNG, ex Coll. G.

Junod); 1 ♂, Na. Tham [NCA], 28.III.1907 (MNHN, ex Coll. R. Oberthür, 1952).

Remarks. *Thermistis apicalis* was considered to be an independent species (Pic 1923), or a subspecies (Nara & Yu 1992) or a morph (Breuning 1966) of *croceocincta*. According to our study on the type specimen and a series of specimens from India and Vietnam, we consider them as the same species.

The type specimen of *Thermistis croceocincta* v. *rufovasalis* Pic was not found in MNHN and was unable to be located. Breuning (1952) ignored this variety and described a new morph "*reducta*", which is possibly to be the same as Pic's variety. Pic's original description was too short and unclear to make identification possible, especially the confusing sentence "Elytres munis d'une forte épine à l'apex". As far as we know, *T. sulphureonotata* has a long spine at the elytral apex, *T. conjunctesignata* has a short spine and *T. xanthomelas* has a very short teeth. Up to now, two species of *Thermistis* have been recorded from Tonkin, *T. croceocincta* and *T. xanthomelas* (same to Breuning's morph "*reducta*"). *T. xanthomelas* may prove to be a synonym of *T. rufovasalis* when the type is located. We follow Breuning (1966) and treat *rufovasalis* as a morph of *T. croceocincta*, and treat *T. xanthomelas* as a valid name.

In the examined *T. croceocincta* series, one female from North Vietnam and one female from Jiangxi province have similar elytral black markings to that of *T. hainanensis* (a middle black marking not reaching lateral margin of elytra), but their small lateral black markings are located posterior than middle black one on the disc. When the black marking is more developed and connect with the lateral one, it would be just the same to the typical *T. croceocincta*.

Host plant. *Camellia oleifera* Abel (THEACEAE), *Cunninghamia lanceolata* Hooker (PINACEAE), *Quercus serrata* Thunberg (FAGACEAE). (Hua 2002)

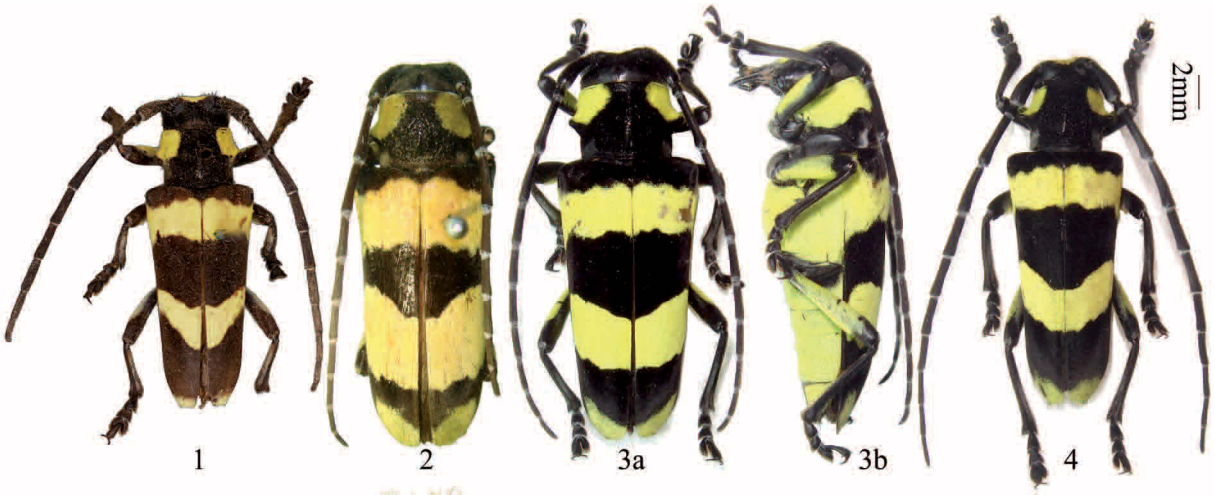
Thermistis hainanensis Lin & Yang n. sp (figs. 9–13, 64)

Description. Male (fig. 9). Length 24.0–25.0 mm, width 8.4–8.5 mm. Body ca 3.0 times as long as width; integument brown to black; surface of head, pronotum, elytra, tibiae and ventral surface densely covered by yellow and black short recumbent pubescences, sparsely intermixing with pale yellow to orange brown erect feeble hairs. Labrum provided with a transverse row of many brown to black long setae arranged in chevron shape. Outer area of mandibles sparsely clothed with black long feeble hairs. Temple with whitish pubescence. Antenna densely clothed with fine recumbent short black pubescence, provided with long feeble hairs sparsely around scape and ventral side of second to ninth segments, but the hairs are getting sparser toward apical segments. Each antennal segment provided with a whitish ring around base and apex (except base of first and second segments and apex of 11th segment). Ventral surface mostly clothed with yellow pubescence except mesepisternum with pale whitish pubescence. Head with a quadrate yellow spot occupying most area of frons. Pronotum with apical half yellow and basal half black, black part with middle extends to 1/2 to 4/5 of pronotum in length, extreme tip of lateral projections black, both sides of basal part (behind lateral tubercle) with whitish pubescence. Each elytron mostly yellow with four black markings: a basal narrow band covered humeral angle but not extends to epipleuron; a middle band situated before middle which is not reaching lateral margin; an apical spot separated from lateral margin; a lateral small spot separated from the middle band, with similar length of the middle band. Abdominal tergite VII with apical lateral margin with yellow pubescence. Legs with femora mostly clothed with yellow pubescence except for apices and dorsal parts, extreme apices and dorsal middle line with whitish pubescence; dorsum of tibiae densely clothed with fine recumbent short black pubescence intermixed with sparse long hairs; each tibia densely furnished ventrally with pale white to pale yellow short suberect hairs which are getting thicker and longer toward apical half of inner area; dorsum of tarsal segments densely clothed with fine recumbent short black pubescence intermixed with sparse long hairs, with pale whitish pubescence at base and apices of each segments.

Head slightly narrower than pronotum. Labrum invert trapezoidal with rounded angles, mat except for glossy apical area. Clypeus narrowly trapezoidal, glossy without punctures. Inferior eye lobe 3.0 times as deep as gena below it. Antenna with last two segments surpassing the elytral apex; relative lengths of segments from base to apex: 26:7:35:34:30:29:28:25:23:20:19. Pronotum wider than long, 1.59 times as the width across lateral projection as long, provided with conical lateral tubercles; disc provided with a longitudinal discal tubercle on basal third. Prosternal process moderately constricted between procoxae, then steeply declined toward dilated apex. Procoxal cavities not closed, but slightly opened behind. Elytra 2.0 times as long as wide, straightly narrowed towards apical tenth, then roundly narrowed to obliquely truncate or nearly rounded apices; when truncate, the angles are obtuse, but sometimes the outer angles are acutely angulated. Apical margin of abdominal sternite VII rounded, without a triangular notch at the middle. Apex of hind femur reaching apical margin of sternite V.

Female (fig. 10). Length 30.0–30.5 mm from the tip of vertex to elytral apex, width 10.5–11.0 mm at elytral humeri. Color and maculation are almost same as male though the proportion is more or less thick, ca 2.9 times as long as wide. Antenna shorter than body length; relative lengths of segments from base to apex: 30:6:37:35:27:25:24:22:20:17:15. Pronotum wider than in male, 1.67 times as the width across lateral projection as long. Apical margin of abdominal sternite VII nearly truncate without notch.

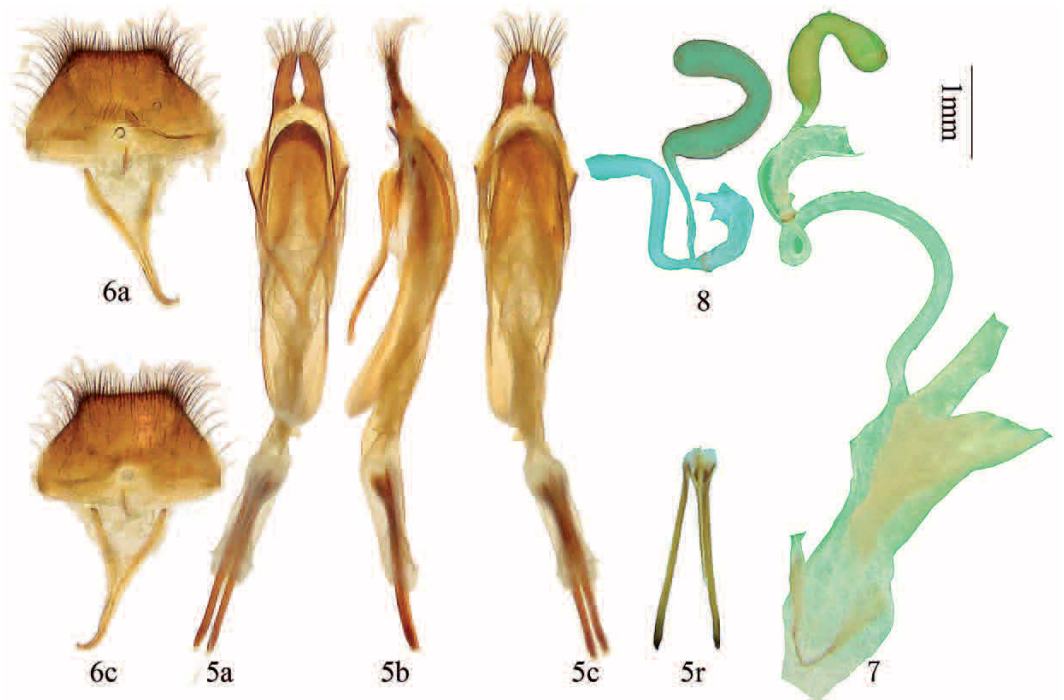
Male terminalia (figs. 11–12). Tegmen length about 3.8 mm; lateral lobes rather straightly tapered from middle to narrowly rounded apices, each about 0.7 mm long and 0.27 mm wide, ventral base of each lobe with a ridge with rounded swelling at inner base from which several setae are arising; median lobe plus median struts slightly curved, slight longer than tegmen (21:19); the median struts slightly longer than half of the whole median lobe in length; apex of ventral plate roundly tapered to narrowly truncated; median foramen elongated; internal sac with 3 rod-like sclerites and two short pieces (fig. 11r), of which paired ones are long baculiform, about 3.3 times as long as the



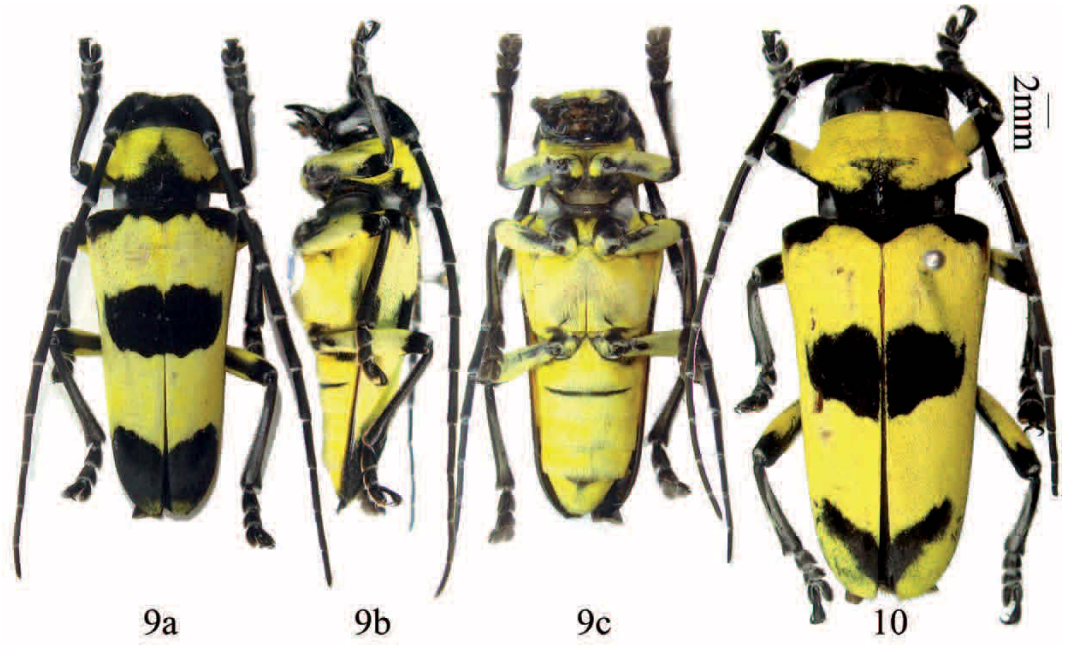
Figures 1–4
Habitus, *Thermistis croceocincta* (Saunders 1839). **1,** syntype, male, from Assam. **2,** type of *T. apicalis* Pic, female, from Tonkin. **3,** female, from Guizhou. a. dorsal view. b. lateral view. **4,** male, from Guizhou.

short one; the basal pieces about one third of the shorter middle baculiform in length; 2 longer rods each about 3.0 mm, shorter than tegmen. Tergite VIII (figs. 12a & 12c) trapezoidal, apex slightly emarginate, provided with median long setae along apical and lateral sides.

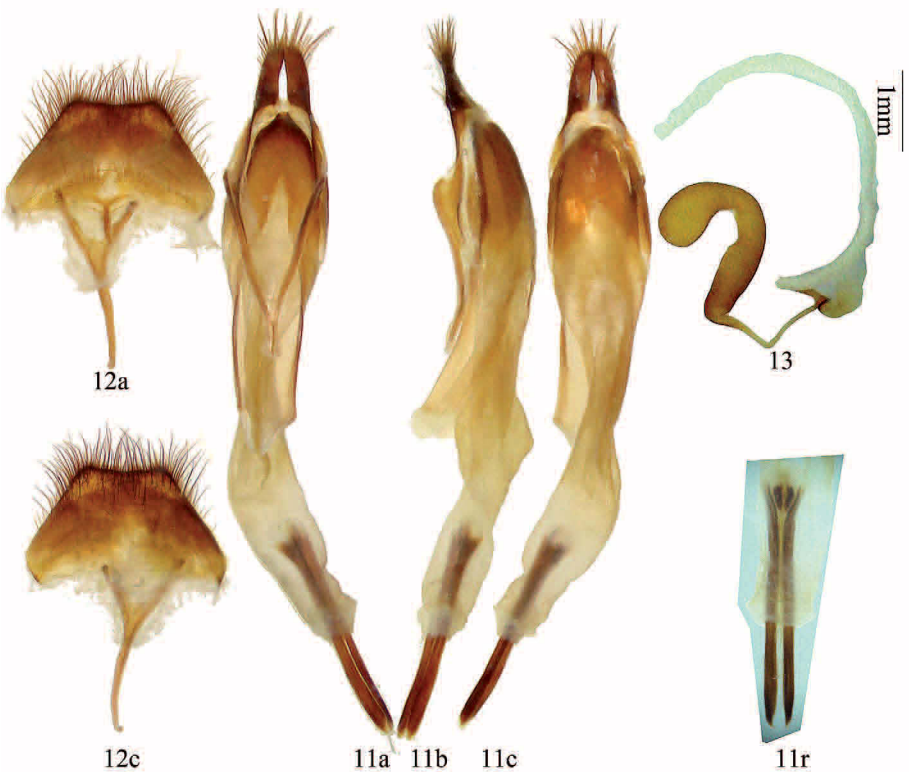
Female genitalia (fig. 13): Spermathecal capsule with both basal stalk and apical lobe strongly curved, with middle part thinner than apical part. Tignum much shorter than abdomen. In our observation, tignum 4.5 mm for an adult with a 12.0 mm abdomen in ventral view.



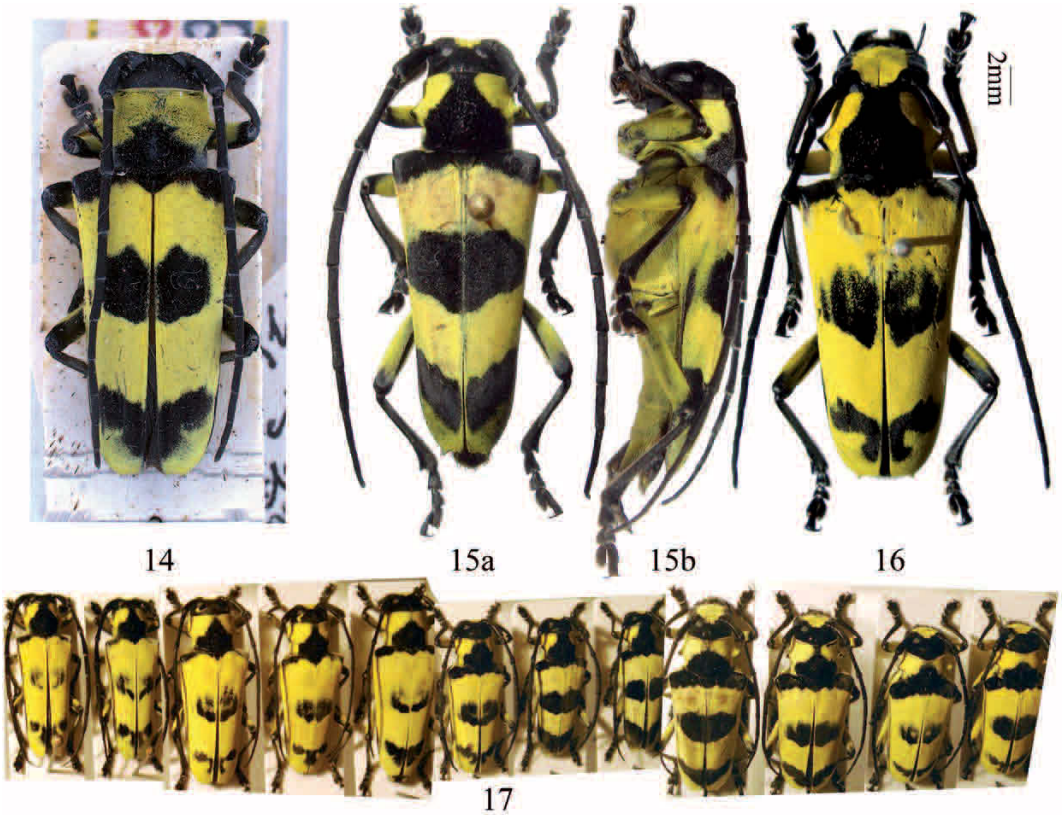
Figures 5–8
Terminalia of *Thermistis croceocincta* (Saunders 1839). **5,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **6,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **7–8,** female genitalia. **7,** spermatheca and vaginal plate. **8,** spermatheca (spermathecal duct, capsule and gland). Scale 1 mm.



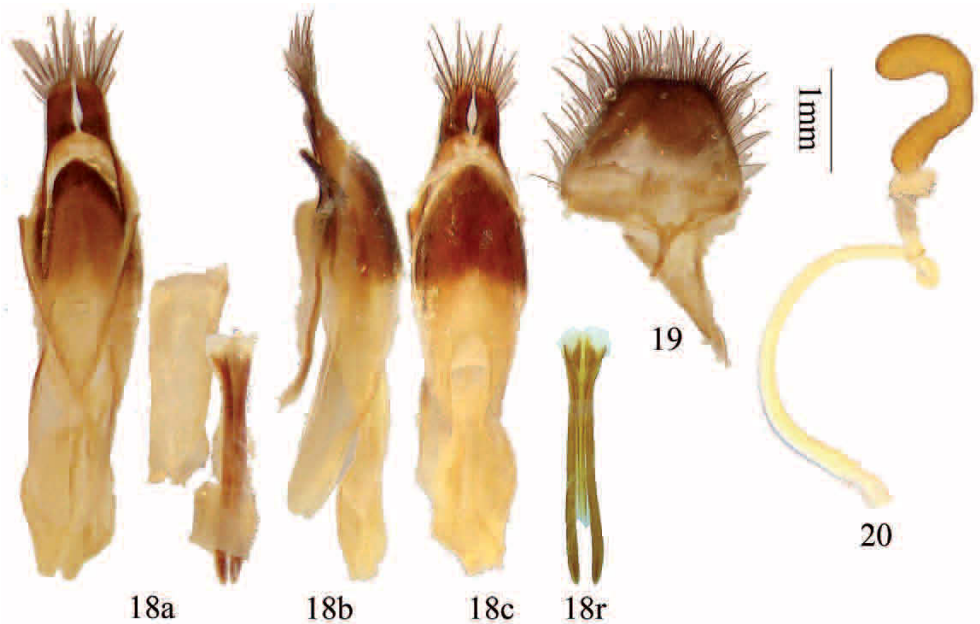
Figures 9–10
Habitus, *Thermistis hainanensis* Lin & Yang **n. sp. 9,** holotype, male, from Hainan. a. dorsal view. b. lateral view. c. ventral view. **10,** paratype, female, from Hainan.



Figures 11–13
Terminalia of *Thermistis hainanensis* Lin & Yang **n. sp. 11,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **12,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **13,** spermatheca. Scale 1 mm.



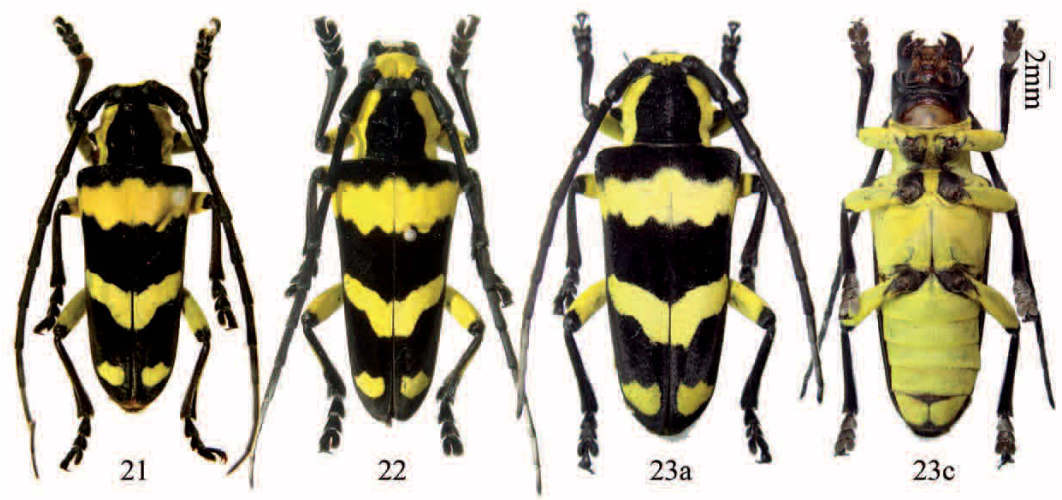
Figures 14–17
Habitus, *Thermistis conjunctesignata* Rondon & Breuning 1971. **14,** holotype, female, from Laos, Vientiane. **15,** male, from Hua Phan prov. of Laos. a. dorsal view. b. lateral view. **16,** female, from Yunnan. **17,** a series specimens from Laos, showing the varieties of black markings on pronotum and elytra.



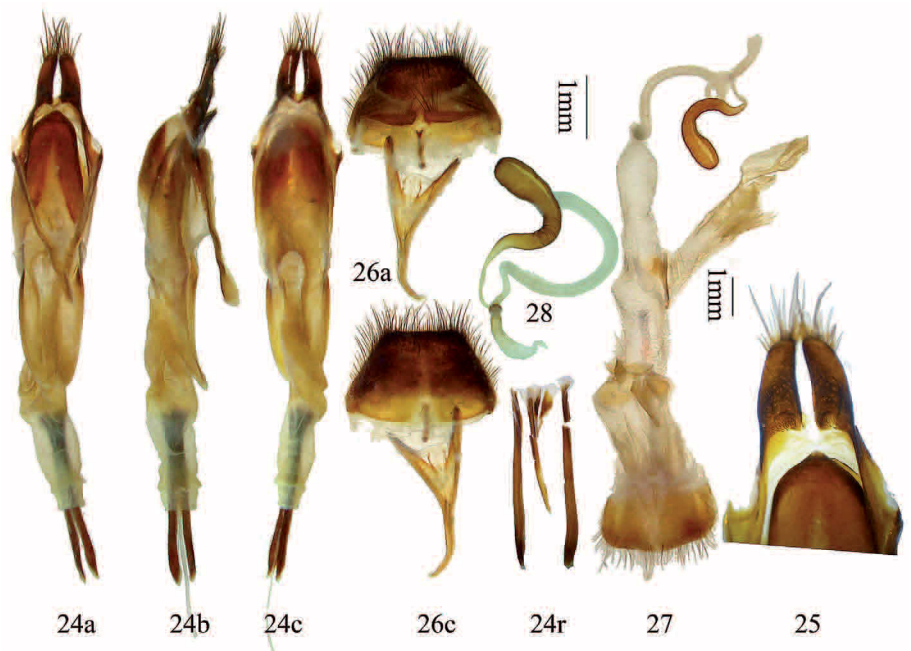
Figures 18–20
Terminalia of *Thermistis conjunctesignata* Rondon & Breuning 1971. **18,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **19,** tergite VIII and sternites VIII & IX in ventral view. **20,** female genitalia, spermathecal duct and capsule, with gland destroyed. Scale 1 mm.

Diagnosis. This new species is strikingly similar to *T. croceocincta* (Saunders), but can be separated from it by the last antennomere shorter than the tenth antennomere, median lobe longer than tegmen, instead of subequal; the longer pair of rod-like sclerites much longer than the short middle one. It also can be separated by the middle black marking on elytra not reach lateral margin, pronotal black marking not as developed as that of *T. croceocincta*, though this kind of pubescent markings may quite variable.

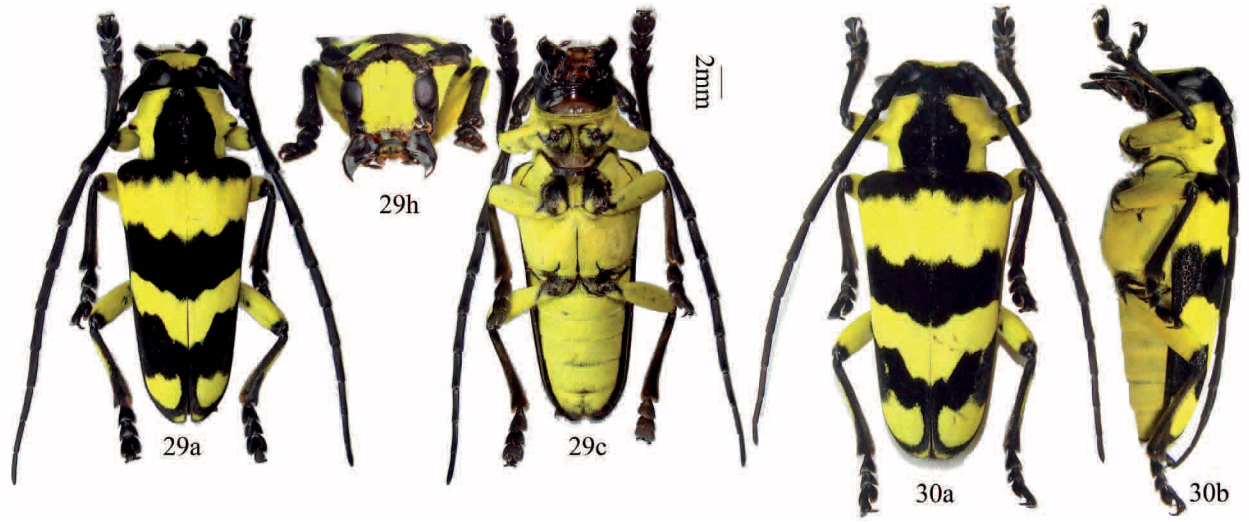
This new species is similar to *T. conjunctesignata* Rondon & Breuning, especially based on the middle black marking on elytra for the first glance, but can be easily distinguished from it by the following features: sides of basal pronotum (behind lateral conical tubercles) black and with whitish pubescence, instead of covered with yellow pubescence; the elytral apical tooth at the outer angle (if have) shorter than that of *T. conjunctesignata*; lateral lobes of male genitalia slenderer; the



Figures 21–23
Habitus, *Thermistis taiwanensis* Nara & Yu 1992. **21,** holotype, male, from Taiwan. **22,** male, from Taiwan. **23,** female, from Taiwan. a. dorsal view. c. ventral view.



Figures 24–28
Terminalia of *Thermistis taiwanensis* Nara & Yu 1992. **24,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **25,** showing lateral lobes, haired small lobes at ventral base, apex of ventral plate of median lobes. **26,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **27–28,** female genitalia. **27,** spermatheca and vaginal plate. **28,** spermatheca (spermathecal duct, capsule and gland). Scale 1 mm.



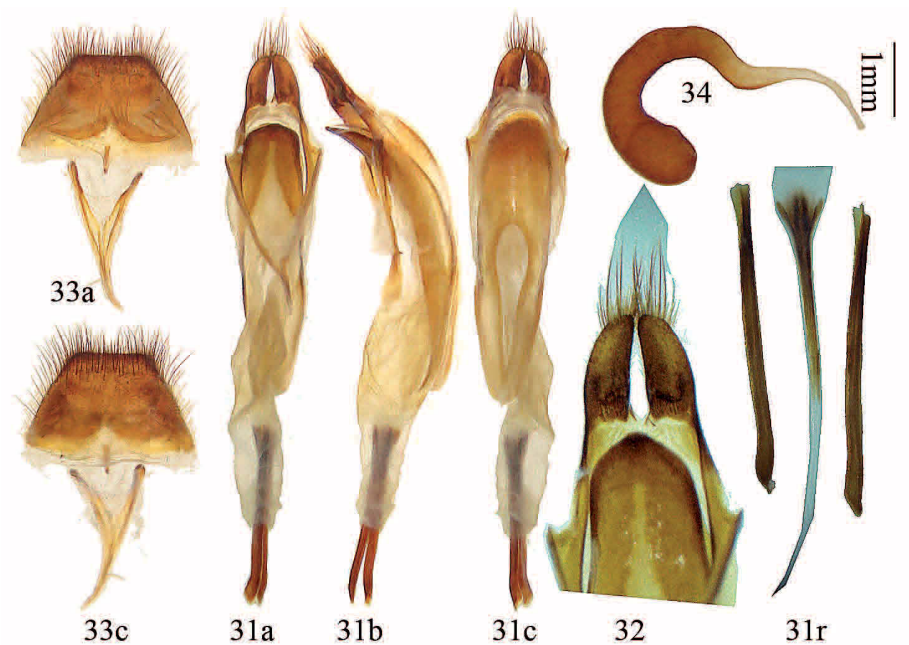
Figures 29–30
Habitus, *Thermistis kaiyuni* Chou & Kurihara **n. sp. 29,** paratype, male, from Taiwan. **30,** paratype, female, from Taiwan. a. dorsal view. b. lateral view. c. ventral view. h. head, in frontal view.

longer rod-like sclerites more than three times of the shorter one in length.

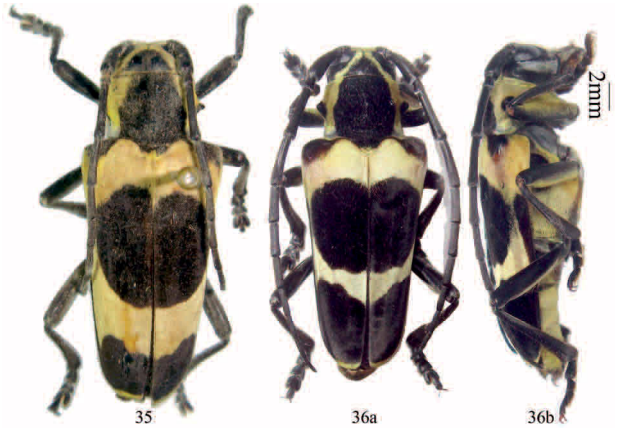
Etymology. This species is named after Hainan Island, the type locality.

Distribution. China (Hainan).

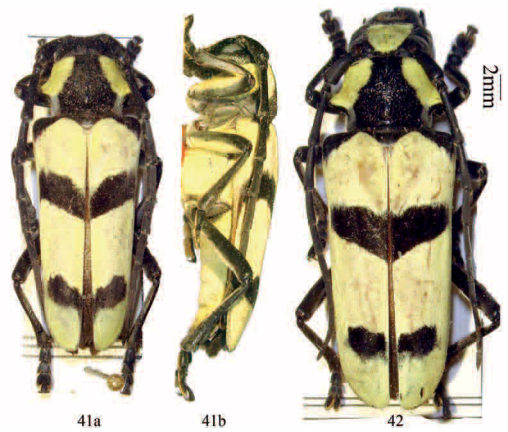
Type specimens. Holotype, ♂ [24.0 mm long, 8.5 mm wide], Hainan Is., Qiongzhong county, Limushan, Binglanghu [19.20136°N 109.72973°E], alt. 562 m, 7.IV.2010, coll. Meiying Lin (IZAS). **Paratypes:** 1 ♂, Hainan Is., Wuzhishan, Dengshandao [18.90840°N 109.67359°E], alt. 708 m,



Figures 31–34
Terminalia of *Thermistis kaiyuni* Chou & Kurihara **n. sp. 31,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **32,** showing lateral lobes, L-shaped ridge at ventral base, apex of ventral plate of median lobes. **33,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **34,** spermatheca. Scale 1 mm.



Figures 35–36
Habitus, *Thermistis nigromacula* Hua 1992. **35,** holotype, female, from Hunan. **36,** male, from Yunnan. a. dorsal view. b. lateral view.



Figures 41–42
Habitus, *Thermistis sagittifera* Pesarini & Sabbadini 1999. **41,** holotype, male, from Sichuan. a. dorsal view. b. lateral view. **42,** female, from Sichuan.

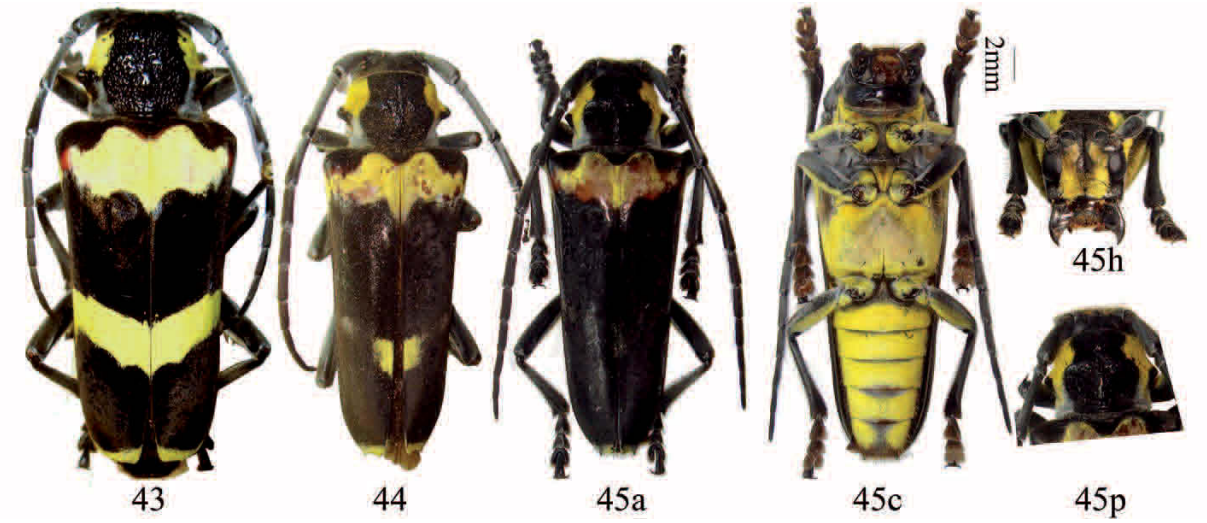
10.IV.2010, coll. Kuiyan Zhang (IZAS); 1 ♀, Hainan Is., Wuzhishan, Shuimanxiang [18°53'N 109°40'E], alt. 700 m, 11.V.2007, coll. Zongyi Zhao (IZAS); 1 ♀, Hainan Is., Qiongzhong county, Diaoluoshan, alt. 600–700 m, 12.V.2008, coll. Hui Lu (CLH); 1 ♂, Hainan Island [NCA], 23.V.1986, coll. Jun Ookuma (EUMJ); 1 ♀, same data but 31.V.1986 (EUMJ).

Thermistis conjunctesignata Rondon & Breuning 1971, stat. nov. (figs. 14–20, 64)

Thermistis croceocincta conjunctesignata Rondon & Breuning 1971: 546, fig. 48.i (Laos). [BPBM 8755]

Thermistis croceocincta m. *conjunctesignata* Breuning 1963: 10, fig (Laos). [BPBM 8755]

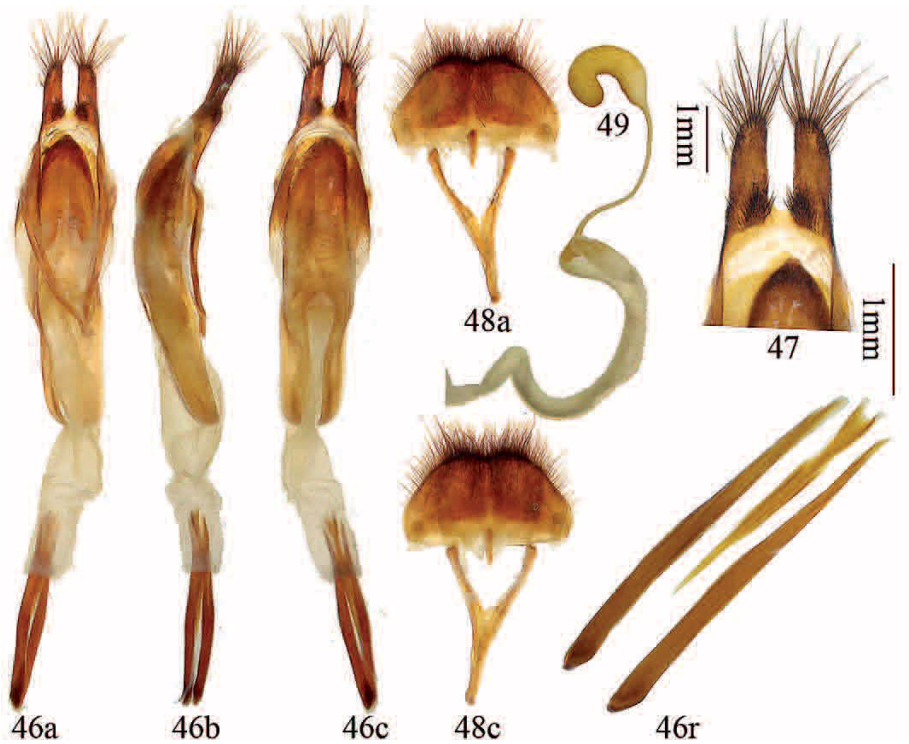
Figures 37–40
Terminalia of *Thermistis nigromacula* Hua 1992. **37,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. **38,** tergite VIII and sternites VIII & IX in ventral view. **39–40,** female genitalia. **39,** spermatheca, vaginal plate and tignum. **40,** spermatheca. Scale 1 mm.



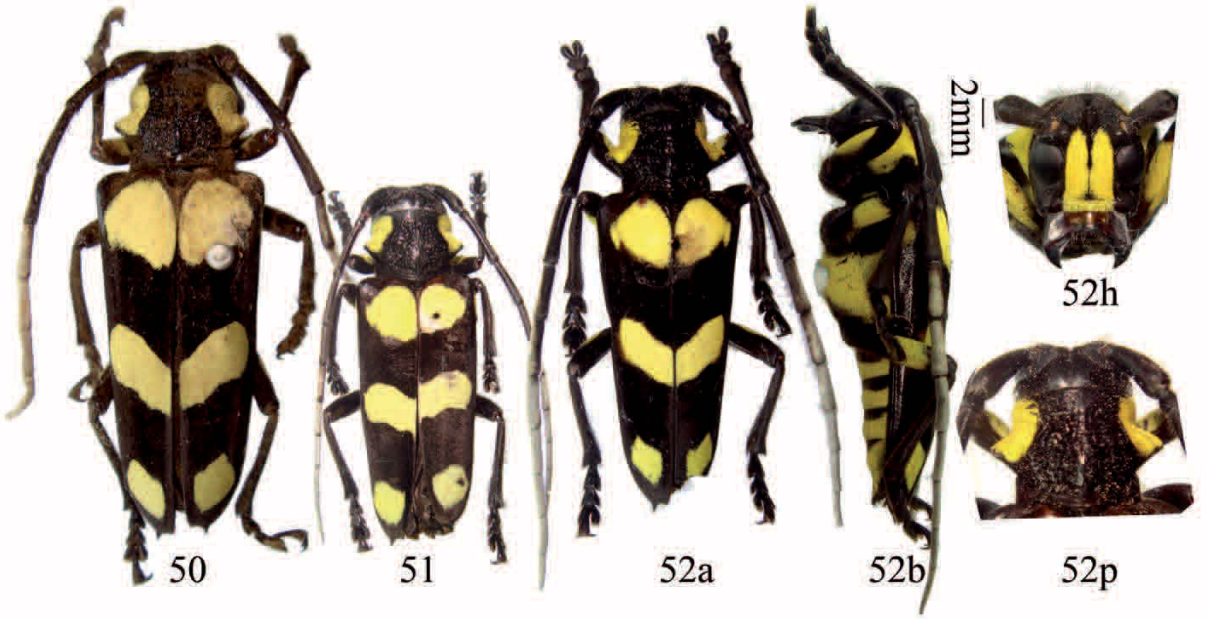
Figures 43–45
Habitus, *Thermistis xanthomelas* Holzschuh 2007. **43,** holotype, female, from Guangxi. **44,** female, from Tonkin of Vietnam. **45,** male, from Yunnan, elytral middle yellow marking disappeared. a. dorsal view. c. ventral view. h. head, in frontal view. p. pronotum, in dorsal view.

Thermistus (sic) *croceocincta* m. *conjunctesignata*: Breuning 1964: 15.- Breuning 1966: 729.

Supplementary description. Male: length: 15.0–22.5 mm, humeral width: 5.0–7.8 mm. Female: length: 20.0–23.5 mm, humeral width: 7.0–8.2 mm. Antennae longer than (male) or subequal to (female) body; antennomere ratio: male: 24:6:33:



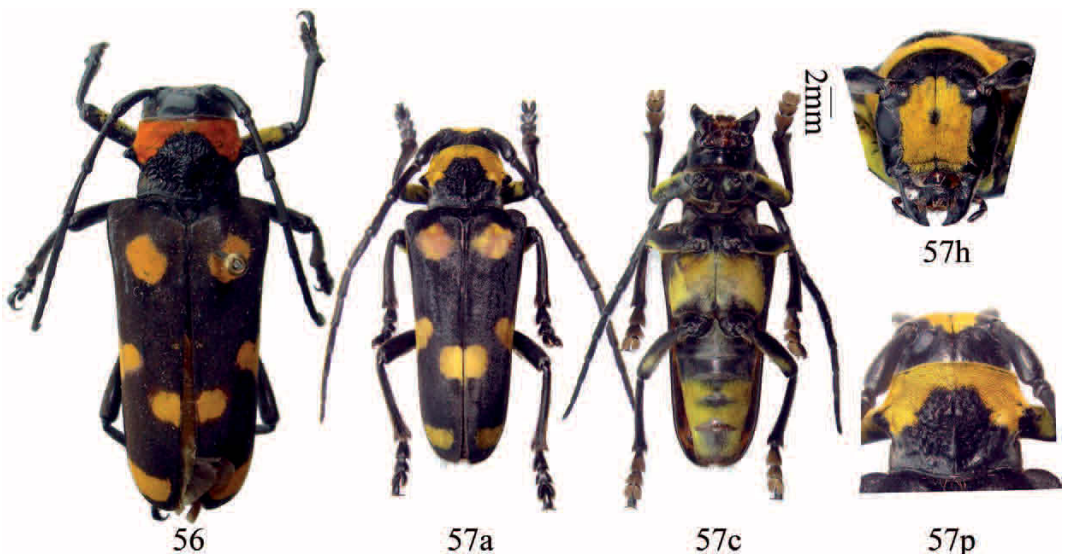
Figures 46–49
Terminalia of *Thermistis xanthomelas* Holzschuh 2007. **46,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **47,** showing lateral lobes, small lobes at base of lateral lobes in ventral view and apex of ventral plate of median lobes. **48,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **49,** female genitalia (spermathecal duct, capsule and gland). Scale 1 mm.



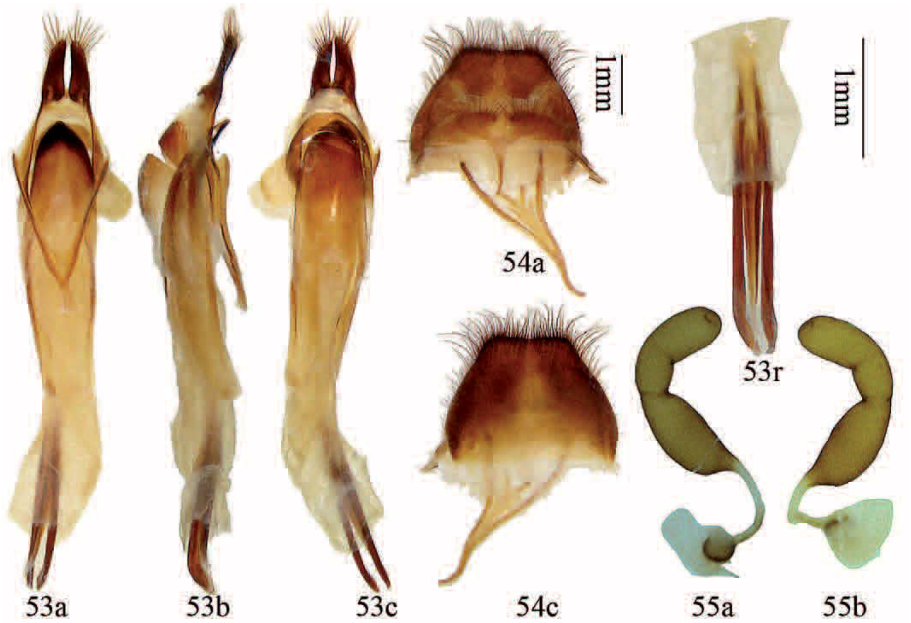
Figures 50–52
Habitus, *Thermistis sulphureonotata* Pu 1984. **50,** holotype, female, from Guangxi. **51,** female, from Guangxi. **52,** male, from Guangxi. a. dorsal view. b. lateral view. h. head, in frontal view. p. pronotum, in dorsal view.

32:27:26:25:22:20:18:18; female: 20:5:28:25:20:19:18:17:16:15:15. Elytral apex slightly truncated, with a minute but perceptible tooth at the outer angle. The black markings on pronotum and elytra variable (fig. 17), from small and blurry to large and obvious.

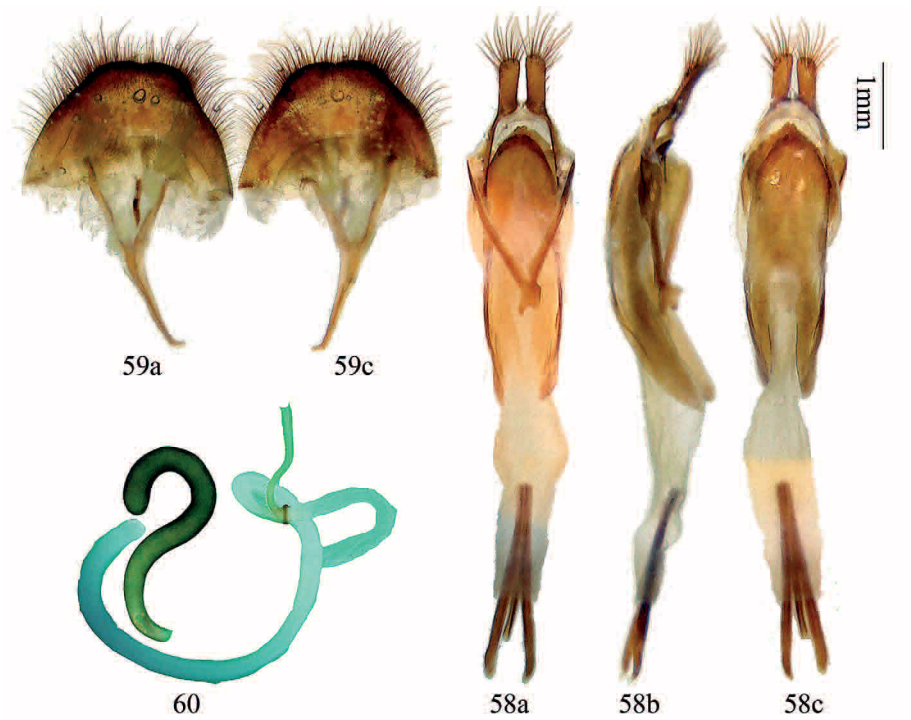
Male terminalia (figs. 18–19). Tegmen length about 3.2 mm; lateral lobes stout, each about 0.5 mm long and 0.25 mm wide, ventral base of each lobe with a transverse ridge with rounded swelling at inner base from which several setae are arising; median lobe plus median struts slightly curved, hardly longer than tegmen (33:32); the median struts subequal to half of the whole median lobe in length; ventral plate roundly tapered to



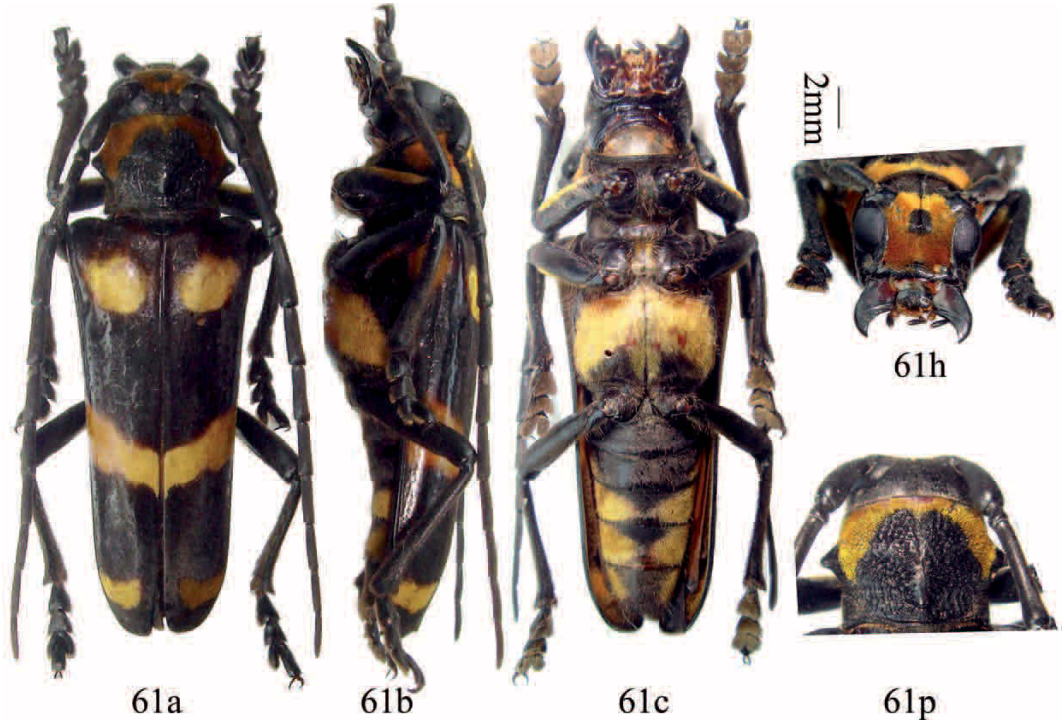
Figures 56–57
Habitus, *Thermistis rubromaculata* Pu 1984. **56,** holotype, female, from Guangxi. **57,** male, from Guizhou. a. dorsal view. c. ventral view. h. head, in frontal view. p. pronotum, in dorsal view.



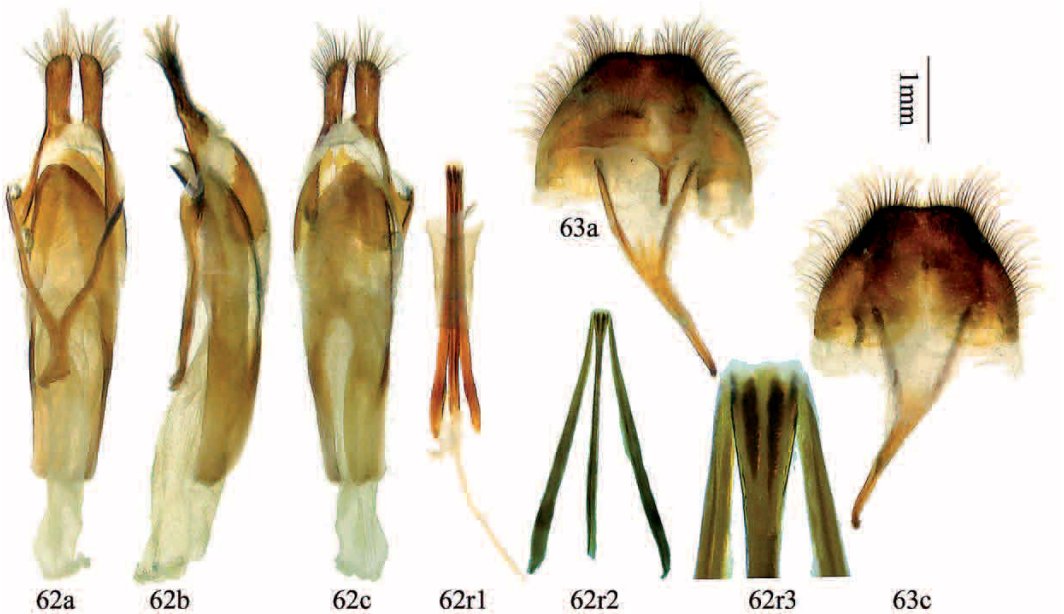
Figures 53–55
Terminalia of *Thermistis sulphureonotata* Pu 1984. **53,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. **54,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **55,** spermatheca. Scale 1 mm.



Figures 58–60
Terminalia of *Thermistis rubromaculata* Pu 1984. **58,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. **59,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view. **60,** spermatheca (spermathecal duct, capsule and gland). Scale 1 mm.



Figures 61
Habitus, *Thermistis cheni* Lin & Chou **n. sp.** holotype, male, from Yunnan. a. dorsal view. c. ventral view. h. head, in frontal view. p. pronotum, in dorsal view.



Figures 62–63
Terminalia of *Thermistis cheni* Lin & Chou **n. sp. 62,** male genitalia. a. ventral view. b. lateral view. c. dorsal view. r. rod-like sclerites. r1. normal way. r2. separate three rods. r3. showing the basal part. **63,** tergite VIII and sternites VIII & IX. a. ventral view. c. dorsal view.

rounded apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites and two short pieces (fig. 18r), of which paired ones are long baculiform, 1.4 times as long as the short one; the short one with dilated and sub-separated base; 2 longer rods each about 2.1 mm, much shorter than tegmen. Tergite VIII (fig. 19) trapezoidal (the ratio of maximum wide to length bigger than that of *T. croceocincta*), apex widely truncated, provided with median long setae along apical and lateral sides.

Female genitalia (fig. 20): Spermathecal capsule with apical lobe strongly curved (the middle curve wider than that of *T. croceocincta*). Tignum much shorter than abdomen. In our observation, tignum 3.0 mm for an adult with a 8.2 mm abdomen in ventral view.

Diagnosis. This new species is most similar to *T. hainanensis*, but can be easily distinguished from it by sides of basal pronotum (behind lateral conical tubercles) covered with yellow pubescence. It is also similar to *T. croceocincta*, but can be easily distinguished by the elytral apical tooth at the outer angle more perceptible, the black macula on middle elytra never reach lateral margin and the yellow pubescence covered the lateral base of pronotum.

Distribution. China (**new country record**) (Yunnan), Laos, Myanmar (**new country record**).

Type specimen examined. Holotype, ♀ (misidentified as male by Breuning, 1963), Laos, Vientiane [17°58'N 102°37'E], IV.1963 (BPBM 8755, examined through pictures taken by Shepherd Myers).

Other specimens examined. China: Yunnan: 1 ♀, Guanping [25°43'N 110°01'E], 26.V.2008, coll. Liwei Wu (CCCC); 3 ♂♂ 1 ♀, Xinping, Mt. Ailaoshan [24°14'N 101°19'E], 1–11.V.2006 (CTK).

Laos: 4 ♂♂ 1 ♀, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pan, [20°12'N 104°01'E], alt. 1,500–1,900 m, 21.IV–13.V.2008, coll. C. Holzschuh (CCH); 1 ♂ 1 ♀, same data but (IZAS, ex CCH); 1 ♂ 1 ♀, same data but 21.IV–13.V.2008 (CLYL, ex CCH); 1 ♂ 4 ♀♀, same data but 17.V–3.VI.2007; 1 ♀, NE Laos, Houa Phan prov., Phou Pan (Mt.) [20°13'N 104°00'E], alt. 1,350–1,500m, 1–16.VI.2009, coll. M. Brancucci (NMB); 2 ♂♂, same data but [20°13'09–19"N 103°59'54"–104°00'03"E], alt. 1,480–1,550m, 1–16.VI.2009, coll. D. Hauck & Z. Kraus (NMB); 1 ♂ 1♀, NE Laos, Houa Phan prov., Ban Saluei to Phou Pan (Mt.) [20°12–13.5'N 103°59.5'E–104°01'E], alt. 1,340–1,870m, 10.V–16.VI.2009, coll. M. Brancucci & local (NMB); 2 ♂♂, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pan, [20°11'N 104°01'E], 5.V.2002, coll. H. Wakahara (EUMJ, "Genitalia 6"); 1 ♀, same data but 25.V.2002 (CTK); 1 ♂ 1 ♀, same data but 27.IV.2001 (EUMJ); 4 ♂♂ 3 ♀♀, same data but 3–13.V.2001 (EUMJ); 1 ♀, same data but 10.VII.2001 (EUMJ); 1 ♂ 1♀, same data but alt. ca. 1,500–1,700 m, 28–29.IV.2002, coll. Ohbayashi (EUMJ); 4 ♀♀, same data but alt. ca. 1,500–1,700 m, 5–13.V.2002, coll. H. Wakahara (CMH); 1 ♀, same data but alt. ca. 1,600–1,900 m, 12.IV–11.V.2005 (EUMJ); 2 ♀♀, same data but alt. ca. 1,400–1,500 m, 20–24.IV.2003, coll. N. Ohbayashi (EUMJ); 6 ♂♂ 3 ♀♀, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pakan, [20°11'N 104°01'E], alt. ca. 1,600 m, 6.V.2002, coll. N. Ohbayashi (EUMJ); 3 ♂♂ 2 ♀♀, Phongsaly prov. Phongsaly [21°41'N 102°08'E], alt. 1,500 m, 28.V–20.VI.2003, coll. C. Holzschuh (CCH); 4 ♂♂ 3 ♀♀, same data but [21°41'N 102°06'E], 6–17.V.2004 (CCH); 1 ♂ 1 ♀, Sam Neua, Ban Saluei to Xieng Khouang [NCA], 25.VI.2003, coll. N. Ohbayashi (EUMJ); 2 ♀♀, Xieng Khouang prov., Pongsawang [20°05'N 102°31'E], alt. 1,200–1,500 m, 12.V.2001 (EUMJ); 1 ♀, Xieng Khouang prov., Phou-Samsoun [20°05'N 102°31'E], IV–VI. 2006, coll. H. Wakahara (CTK); 1 ♀, Xieng Khouang prov., Phonsavan (30 km NE), Phou Sane (Mt.) [19°37–38'N 103°20–21'E], alt. 1,400–1,700m, 10–30.V.2009, coll. D. Hauck (NMB); 1 ♂, same data but [19°38.20'N 103°20.20'E], alt. 1,420 m, 10–30.V.2009, coll. M. Geiser (IZAS ex NMB); 1 ♂, same data but [19°37–38'N 103°20'E], alt. 1,400–1,500m, 10–30.V.2009, coll. Z. Kraus (NMB); 2 ♂♂ 1 ♀, Xieng Khouang prov., Phonsavan (30 km NE), Ban Na Lam to Phou Sane (Mt.) [19°37–38'N 103°20'E], alt. 1,300–1,500m, 10–30.V.2009, coll. M. Brancucci (NMB).

Myanmar: 1 ♀, Taunggyi, Shan State [20°47'N 97°03'E], 5–23.VI.2008, coll. Native collector (EUMJ); 1 ♂, same data but in CTK; 1 ♂, same data but in CNO; 2 ♂♂ 3 ♀♀, N. E. Myanmar, Sikaw, Kachin prov. [23°49'N 97°04'E], 20.V–10.VI.2009, coll. native collector (CYO).

Remarks. Breuning (1963) described it as a morph, using the term "m.", making it an infrasubspecific name. Rondon & Breuning (1971) applied the same word to a subspecies and made it an available name. According to Article 45.5.1 of the International Code of Zoological Nomenclature, Rondon & Breuning 1971 are the authors and described year of the valid name '*conjunctesignata*'. In this paper the rank is raised to the species level.

Thermistis taiwanensis Nara & Yu 1992 (figs. 21–28, 67)

Termistis taiwanensis Nara & Yu 1992: 132 (Taiwan). [CMYJ= M. Yagi's collection, Japan]

Thermistis taiwanensis: Chou 2004: 338.- Hua, Nara, Saemulson & Lingafelter 2009: 119, fig. 1382.- Löbl & Smetana 2010: 332.

Supplementary description. Male: length: 22.0–27.0 mm, humeral width: 8.0–10.0 mm. Female: length: 26.0–29.0 mm, humeral width: 9.8–11.0 mm. Antennae longer than (male) or subequal to (female) body; antennomere ratio: male: 28:8:42:37:30:27:26:25:24:21:20; female: 30:7:43:37:26:24:22:20:18:17:15. Elytral apex slightly truncated to rounded.

Male terminalia (figs. 24–26). Tegmen length about 4.0 mm; lateral lobes rather straightly tapered from middle to narrowly rounded apices, each about 0.7 mm long and 0.3 mm wide, ventral base of each lobe with a L-shaped ridge with rounded swelling at inner base from which several setae are arising; median lobe plus median struts slightly curved, longer than tegmen (9: 8); the median struts about half of the whole median lobe in length; ventral plate roundly tapered to narrowly truncated apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites (fig. 24r), of which paired ones are long baculiform, 1.8 times as long as the short one; the short one with dilated and sub-separated base; 2 longer rods each about 2.8 mm, much shorter than tegmen. Tergite VIII (figs. 26a & 26c) trapezoidal, apex widely truncated, provided with median long setae along apical and lateral sides.

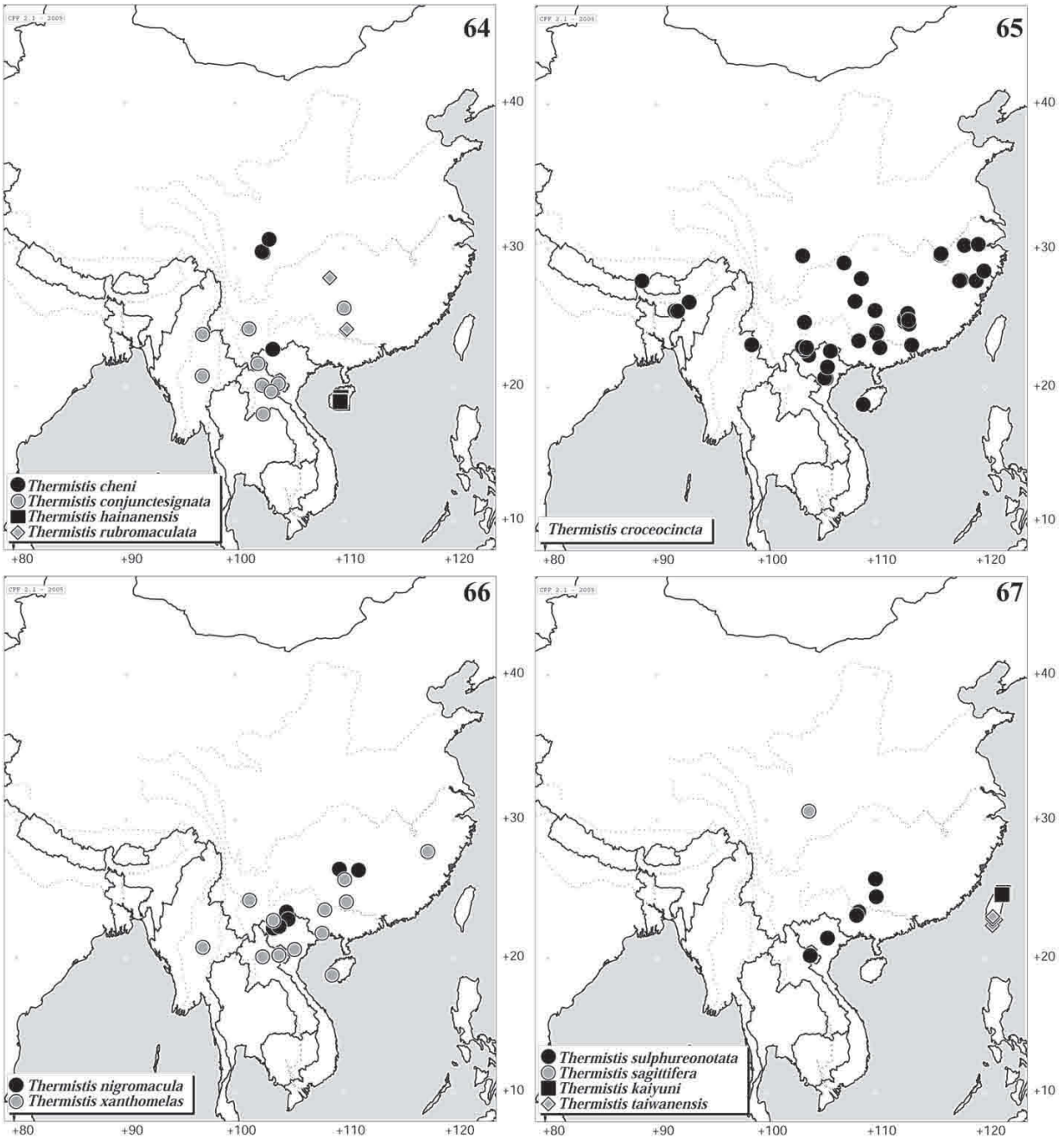
Female genitalia (figs. 27–28): Spermathecal capsule strongly curved. Tignum much shorter than abdomen. In our observa-

tion, tignum 4.6 mm for an adult with a 11.5 mm abdomen in ventral view.

Distribution. Taiwan.

Type specimen examined. Holotype: ♂, Taiwan, Kaohsiung County, Mt. Chingta-shan [22°53'N 120°43'E], 6.V.1991, coll. Masamichi Yagi (OMNH, ex M. Yagi's collection, Japan, examined through pictures taken by Shigehiko Shiyake).

Types information. Paratype: 1 ♀, Taiwan, Kaohsiung county, Tengchih [23°04'N 120°44'E], 27.V.1990, coll. Shing-chi Huang (Muh-sheng Museum of Entomology collection, unfound).



Figures 64–67
Distribution maps of Thermistis spp. **64**, *T. cheni* Lin & Yang **n. sp.**, *T. conjunctesignata* Rondon & Breuning 1971, *T. hainanensis* Lin & Yang **n. sp.** et *T. rubromaculata* Pu 1984; **65**, *T. croceocincta* (Saunders 1839); **66**, *T. nigromacula* Hua 1992 et *T. xanthomelas* Holzschuh 2007; **67**, *T. sulphureonotata* Pu 1984, *T. sagittifera* Persarini & Sabbadini 1999, *T. kaiyuni* Chou & Kurihara **n. sp.** et *T. taiwanensis* Nara & Yu 1992.

Other specimens examined. Taiwan: 5 ♂♂, Taitung county, Beinan Township, Lijialindao [22°50'N 121°00'E], alt. 1,200 m, 6.VII.2009, coll. Wen-I Chou (CCCC); 1 ♂ 1 ♀, same data but 23.VII.2005, coll. Wen-I Chou (CWIC); 2 ♂♂, same data but 1.VII.2007, coll. Wen-I Chou (CWIC); 2 ♂♂, same data but 7.VII.2007, coll. Wen-I Chou (CWIC); 1 ♂, same data but 13.VII.2007, coll. Wen-I Chou (CWIC); 1 ♂ 2 ♀♀, same data but 26.VII.2008, coll. Wen-I Chou (CWIC); 1 ♂, same data but 28.VI.2009, coll. Wen-I Chou (CWIC); 4 ♂♂, same data but 26.VI.2010, coll. Wen-I Chou (CWIC); 1 ♀, same data but 27.VI.2010, coll. Wen-I Chou (CWIC);1 ♂ 1 ♀, same data but 17.VII.2005, coll. Kaiyun Chang (CKYC); 1 ♂, same data but 23.VII.2006, coll. Kaiyun Chang (CKYC); 1 ♀, same data but 1.VII.2007, coll. Kaiyun Chang (CKYC); 1 ♂, same data but 15.VII.2007, coll. Kaiyun Chang (CKYC); 1 ♂ 1♀, same data but 22.VII.2007, coll. Kaiyun Chang (CKYC); 4 ♂♂ 1 ♀, same data but 29.VI.2008, coll. Kaiyun Chang (CKYC); 2 ♂♂, same data but 6.VII.2008, coll. Kaiyun Chang (CKYC); 4 ♂♂, same data but 28.VI.2009, coll. Kaiyun Chang (CKYC); 5 ♂♂, same data but 16.VII.2009, coll. Changchin Chen (CCCC, with 3 ♂♂ in IZAS); 2 ♂♂, same data but 30.VI–1.VII.2008, coll. Chang-chin Chen (CCCC); 1 ♂ 1 ♀, same data but 14.VII.2001, coll. Wen-I Chou (CWIC); 1 ♂ 1 ♀, same data but 30.VI.2009, coll. Changchin Chen (IZAS ex CCCC); 1 ♂ 1 ♀, Taitung county, Lichia logging road [22°50'N 121°00'E], 19–21.VII.2008, coll. N. Ohbayashi (CNO); 2 ♂♂, same data but coll. Y. Okahana (CYO); 1 ♂, same data but coll. Y. Okahana (CTK); 1 ♂, same data but 6–9.VII.29, coll. N. Ohbayashi (CNO); 1 ♂ 1 ♀, Pingtung county, Dahanshan [22°25'N 120°42'E], 4-8.VII.2007, coll. LV S-Z (CCCC); 1 ♂, same data but 5.VIII.2006, coll. Wen-I Chou (CWIC);1 ♂, same data but 11.VII.2010, coll. Wen-I Chou (CWIC); 1 ♂, Taitung county, Yenping Township, Yenpinglindao [22°55'N 120°02'E], 22.VII.2010, coll. Wen-I Chou (CWIC) 1 ♂, same data but 16.VII.2010, coll. Wen-I Chou (CWIC).

Remarks. This is an endemic species from Taiwan.

Thermistis kaiyuni Chou & Kurihara n. sp. (figs. 29–34, 67)

Description. Male (figs. 29a, 29c & 29h). Length 21.0–25.8 mm, width 8.2–9.5 mm. Body ca 2.7 times as long as width; integument black except for clypeus and narrow apical margins of abdominal sternites III–VI which are brown; surface of head, pronotum, elytra, tibiae and ventral surface densely covered by yellow and black short recumbent pubescences, sparsely intermixing with pale yellow to orange brown erect feeble hairs. Labrum provided with a transverse row of many pale brown long setae arranged in chevron shape. Outer area of mandibles sparsely clothed with pale brown long feeble hairs. Antenna densely clothed with fine recumbent short black pubescence, provided with long feeble hairs sparsely around scape and ventral side of second to ninth segments, but the hairs are getting sparser toward apical segments. Ventral surface mostly clothed with yellow pubescence; dorsum marked by yellow pubescence as following manner. Head with a quadrate yellow spot occupying most area of frons. Pronotum with both sides except for extreme tip of lateral projections yellow. Each elytron with four yellow markings: a basal band which is 1/4 as wide as elytral length at the widest point near suture; an oblique middle band situated behind middle which is not reaching lateral margin; an apical cup-shaped spot separated both from suture and lateral margin; an oblique small spot along inner apical margin. Abdominal tergite VII with apical lateral margin with yellow pubescence. Legs with femora mostly clothed with yellow pubescence except for extreme apices; dorsum of tibiae densely clothed with fine recumbent short black pubescence intermixed with sparse long hairs except for hind tibia which is provided with a line of yellow pubescence; each tibia densely furnished ventrally with light to deep brown short suberect hairs which are getting thicker and longer toward apical half of inner area; dorsum of tarsal segments densely clothed with fine recumbent short black pubescence intermixed with sparse long hairs.

Head (fig. 29h) slightly narrower than pronotum. Labrum invert trapezoidal with rounded angles, mat except for glossy apical area. Clypeus narrowly trapezoidal, glossy without punctures. Inferior eye lobe 1.3 times as deep as gena below it. Antenna with last two segments surpassing the elytral apex; relative lengths of segments from base to apex: 30:6:42:38:30:29:27:25:24:22:24. Pronotum wider than long, 1.47 times as the width across lateral projection as long, provided with conical lateral tubercles of which the tips slightly directed backward; disc provided with invert-triangularly arranged three discal tubercles, of which a pair is situated near middle, and a longitudinal one is on basal third, irregularly arranged several deep punctures around the tubercles. Prosternal process moderately constricted between procoxae, then steeply declined toward dilated apex. Procoxal cavities not closed, but slightly opened behind. Elytra 1.93 times as long as wide, straightly narrowed towards apical tenth, then roundly narrowed to obliquely truncate or nearly rounded apices; when truncate, the angles are obtuse, but sometimes the outer angles are acutely angulated. Apical margin of sternite VII rounded, provided with a triangular notch at the middle. Apex of hind femur reaching apical margin of abdominal sternite V.

Female (figs. 30a & 30b). Length 20.8–27.0 mm from the tip of vertex to elytral apex, width 8.5–11.4 mm at elytral humeri. Color and maculation are almost same as male though the proportion is more or less thick, ca 2.5 times as long as wide. Antenna with only the last segment surpassing the elytral apex; relative lengths of segments from base to apex: 26:5:34:30:23:21:20:19:17:16:17.5. Pronotum wider than in male, 1.54 times as the width across lateral projection as long. Apical margin of abdominal sternite VII nearly truncate without notch.

Male terminalia (figs. 31–33). Tegmen length about 3.5 mm; lateral lobes rather straightly tapered from middle to narrowly rounded apices, each about 0.7 mm long and 0.3 mm wide, ventral base of each lobe with a L-shaped ridge with rounded swelling at inner base from which several setae are arising; median lobe plus median struts slightly curved, slight longer than tegmen (38: 35); the median struts longer than half of the whole median lobe in length; ventral plate roundly tapered to narrowly truncated apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites (fig. 31r), of which paired ones are long baculiform, 1.4 times as long as the short one; the short one with dilated and subseparated base; 2 longer rods each about 2.5 mm, much shorter than tegmen. Tergite VIII (figs. 33a & 33c) trapezoidal, apex widely truncated, provided with median long setae along apical and lateral sides.

Female genitalia (fig. 34): Spermathecal capsule strongly curved. Tignum much shorter than abdomen. In our

observation, tignum 3.7 mm for an adult with a 9.8 mm abdomen in ventral view.

Diagnosis. This new species is strikingly similar to *T. taiwanensis*, but can be easily distinguished from it by the following features: antennae uniformly black instead of apical half of 8th to basal half of the last segments clothed with appressed shining whitish pubescence on dorsum; lateral conical tubercles of pronotum more or less weaker with the tips slightly directed backward; the black spot at the tip of lateral pronotal tubercle smaller than *T. taiwanensis*; elytra shorter, ca 1.9 times as long as wide instead of ca 2.1 times in both sexes; basal yellow band of elytra distinctly wider, elytral yellow areas larger than black areas; prosternal process moderately constricted between procoxae instead of strongly constricted.

Etymology. The specific epithet is dedicated to Mr. Kaiyun Chang who firstly found this interesting new species.

Distribution. Taiwan (I-lan Co.).

Host plant. *Eurya acuminata* DC. (Theaceae). The adults usually post-feed the leaves of *Cleyera japonica* Thunb. var. *morii* (Yam.) Masam. (Theaceae).

Type specimens. Holotype, ♂ [22.5 mm long, 8.5 mm wide], Taiwan, I-lan county, Jiaosi township, Xiaojiaosi [24°47'N 121°42'E], 31.V.2009, coll. Kaiyun Chang (NMNST). **Paratypes:** same locality as for the holotype, 2 ♂♂, 31.V.2009, coll. Kaiyun Chang; 2 ♂♂, 7.VI.2009, coll. Kaiyun Chang; 1 ♂, 14.VI.2009, coll. Kaiyun Chang; 1♂, 5.VII.2009, coll. Kaiyun Chang; 2 ♂♂ 2 ♀♀, 16.V.2010, coll. Kaiyun Chang; 1 ♂ 1 ♀, 19.V.2010, coll. Kaiyun Chang; 2 ♂♂ 1 ♀, 6.VI.2009, coll. Wen-I Chou; 1 ♂, 20.VI.2009, coll. Wen-I Chou; 1 ♂, 13.V.2010, coll. Wen-I Chou; 8 ♂♂ 3 ♀♀, 15.V. 2010, coll. Wen-I Chou; 2 ♂♂ 1 ♀, 16.V.2010, coll. Wen-I Chou; 1 ♂ 2 ♀♀, 20.V.2010, coll. Wen-I Chou; 1 ♀, I-lan county, Jiaosi township [24°48'N 121°44'E], 14.VI.2004, coll. Renwei Ye & Renfu Liu; 1 ♀, I-lan county, Qilan [24°40'N 121°37'E], 20.VI.2003, coll. Yongsheng Chang; 2 ♂♂, I-Lan county, Datung Township, Yu-Lan village [24°40'N 121°35'E], 22.V.2011, coll. Kai-Yun Chang. Paratypes are deposited in IZAS, CKYC, CWIC, CCCC, CNO and EUMJ.

Remarks. Up to the present time, only one species of the genus *Thermistis* has been known from Taiwan. *T. taiwanensis* has been recorded from Kaoshiung, Pingtung and Taitung counties, Southern part of Taiwan. However in 2009, Mr. Kaiyun Chang, a resident of Taipei, collected some specimens of this genus from I-lan county, northern Taiwan. It looks very similar to *T. taiwanensis*, but the body proportion or elytral maculation seemed to differ a little upon initial examination. Wen-I Chou tried to collect additional specimens and determine the host plant of this species together with our fellow-enthusiast. In February of 2010, we found the host plant of this species and collected several larvae, of which some have since emerged as adults. In addition, we collected adult specimens during April to June 2010. After a close comparison of these specimens with *T. taiwanensis*, we came to conclusion that it is new to science.

Thermistis nigromacula Hua 1992 (figs. 35–40, 66)

Thermistis nigromacula Hua 1992: 521, 523, fig. 1627 (Hunan). [SYSU]
Thermistis nigromacula: Pesarini & Sabbadini 1999: 67.- Hua, Nara, Saemulson & Lingafelter 2009: 119, fig. 1381.- Löbl, *et al.* 2010: 332.

First description of male and supplementary description: Male (figs. 36a–b) length 23.0–26.5 mm from the tip of vertex to elytral apex, width 9.0–9.5 mm at elytral humeri. Color and maculation are almost same as female, ca 2.56 times as long as wide. Antenna slightly longer than body length; relative lengths of segments from base to apex: 26:8:37:32:25:23:21:19:18: 16:18.

Male terminalia (figs. 37–38). Tegmen length about 3.6 mm; lateral lobes stout and with apices widely and obliquely truncated, each about 0.6 mm long and 0.3 mm wide, ventral base of each lobe with two small lobes finely haired; median lobe plus median struts slightly curved, slight longer than tegmen (10: 9); the median struts longer than half of the whole median lobe in length; ventral plate with rounded apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites, of which paired ones are long and thick baculiform, ca. 1.35 times as long as the short one; 2 longer rods each about 2.3 mm, much shorter than tegmen. Tergite VIII (fig. 38) trapezoidal, apex emarginated and rounded at sides, provided with median long setae along apical and lateral sides.

Female genitalia (figs. 39–40): Spermathecal capsule strongly curved between the thin basal stalk and the stout apical lobe (not curved). Tignum much shorter than abdomen. In our observation, tignum 4.8 mm for an adult with a 11.2 mm abdomen in ventral view.

Diagnosis. This species is related to *T. croceocincta*, but having the body larger, the inferior eye lobe shorter than gena below it, the basal and distal segments of antenna without white pubescence, and having a semicircle or oblong large black macula before the middle of elytron (Hua, 1992).

This species can be easily separated from all the other species of this genus by having yellow line behind eyes.

Distribution. China (Hunan, Yunnan (**new province record**)), Vietnam (Lao Cai prov. is a new province record).

Type specimen examined. Holotype, ♀, Hunan, Dong'an, Damiaokou Linchang (Forest Station) [26°24'N 111°18'E], 12.VI.1981, coll. Xiaosheng Long (SYSU). Paratypes, 2 ♀♀ Hunan, Jingxian, Paiyashan [26°29'N 109°32'E], 30.V.1988, coll. Mingde Han (SYSU). **Other specimens examined. Yunnan:** 4 ♂♂ 4 ♀♀, Xichou E. env. [23°22'N 104°42'E], alt. 1,400–1,700m, 13–18.V.1995, coll. L.+R. Businský (CCH).

Vietnam: 1 ♀, North Vietnam, Lao Cai prov. [22°19'N 104°01'E], Deo O Quy Ho, alt. 1,600–1,650 m, 1.VI.1999, coll. A. Saito (CASJ); 1 ♂, Chapa [22°11'N 103°30'E] (MHNG, ex Coll. S. Breuning); 1 ♀, Ha Giang [22°50'N 104°50'E], VI–VII.2006 (CTK); 1 ♀, Ha Giang [22°50'N 104°50'E] (examined through pictures from http://www.cerambycoidea.com/foto.asp?Id=2433 in 15.XI.2010).

Remarks. This species is newly recorded from Yunnan of China.

Thermistis sagittifera Pesarini & Sabbadini 1999 (figs. 41–42, 67)

Thermistis sagittifera Pesarini & Sabbadini 1999: 67, fig. 5 (Sichuan). [CPS]

Thermistis sagittifera: Löbl & Smetana 2010: 332.

Diagnosis. This species can be distinguished from the other so far known species of *Thermistis* through the character combination: antennae uniformly black; sides of basal portion of pronotum (behind lateral tubercles) with whitish pubescence; elytral apex rounded and black marking on elytral disc smaller.

Distribution. Sichuan.

Type specimens examined. Holotype, ♂, Sichuan, Mt. Dabashan [30°38'N 103°54'E], 28.VII.1997, coll. Local collector (CPS); paratype, ♀, same data.

Thermistis xanthomelas Holzschuh 2007 (figs. 43–49, 66)

Thermistis xanthomelas Holzschuh 2007: 263, abb. 64 (Guangxi). [CCH]
Thermistis croceocincta m. *reducta* Breuning 1952: 197 (Tonkin). [MHNL]
Thermistis croceocincta m. *reducta*: Breuning 1966: 729.
Thermistis xanthomelas: Löbl & Smetana 2010: 332.

Supplementary description. Male: length: 23.0–26.0 mm, humeral width: 7.5–9.0 mm. Female: length: 25.0–30.0 mm, humeral width: 9.0–11.0 mm. Antennae subequal to (male) or shorter than (female) body; antennomere ratio: male: 24:7: 37:30:23:20:19:18:17:16:18; female: 22:6:34:25:20:18:16: 14:13:12:13. Elytral apex slightly truncated to slightly emarginate, with a minute but perceptible tooth at the outer angle. Elytral yellow markings variable (figs. 43–45), the apical and middle ones may smaller and blurry to disappeared.

Male terminalia (figs. 46–48). Tegmen length about 4.2 mm; lateral lobes slender, each about 0.8 mm long and 0.25 mm wide, ventral base of each lobe with 2 small lobes with setae; median lobe plus median struts slightly curved, slight longer than tegmen (22: 21); the median struts shorter than half of the whole median lobe in length; ventral plate roundly tapered to narrowly truncated apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites (fig. 46r), paired ones are long baculiform, about 1.67 times as long as the shorter middle one; the middle one sub-separated; 2 longer rods each about 3.0 mm, much shorter than tegmen. Tergite VIII (figs 48a&c) trapezoidal, apex emarginated and rounded at sides, provided with median long setae along apical and lateral sides.

Female genitalia (fig. 49): Spermathecal capsule has a long and thin stalk and a strongly curved apical lobe, stalk much longer than apical lobe. Tignum much shorter than abdomen. In our observation, tignum 5.0 mm for an adult with a 11.0 mm abdomen in ventral view.

Distribution. China (Fujian (**new province record**), Hainan (**new province record**), Guangxi, Yunnan (**new province record**)), Vietnam (**new country record**), Laos (**new country record**), Myanmar (**new country record**).

Type specimen examined. Holotype, ♀, Guangxi, 15km S from Longsheng [25°43'N 110°01'E], alt. 1,000 m, 15–23.VI.1995, coll. A. Shamaev (CCH).

Other specimens examined. Fujian: 2 ♀♀, Fukien, Kuatun [27°44'N 117°38'E], 22.VII.1946, coll. Tschung Sen (NMB, ex Coll. Frey); 1 ♀, Mts. Wuyishan, Dazhulan [27°41'N 117°39'E], alt. 900–1,000 m, 9.VIII.2005, coll. Meiying Lin (IZAS). **Hainan:** 1 ♂, Jianfengling [18°44'N 108°52'E], 2–10.VIII.2004 (CNO). **Guangxi:** 1 ♀, Jiuxiu [24°07'N 110°11'E], Linhaishanzhuang, alt. 1,000m, 2.VII.2000, coll. Jun Chen (IZAS) ; 2 ♀♀, Jinxiu, Mt. Dayaoshan [24°08'N 110°11'E], VII.2008 (IZAS ex CCCC)' 1 ♀, same data in CCCC; 2 ♀♀, Fangcheng, Fulong [21°49'N 107°57'E], alt. 550m, 26.V.1999, coll. Dajun Liu (IZAS); 1 ♀, Damingshan [23°31'N 108°12'E], 2008 (CZCH); 1 ♀, Guangxi [NCA], VI.2005 (CJM). **Yunnan:** 4 ♂♂ 1 ♀, Jinping, Maandi, Biaoshuiyan [22°44'N 103°29'E], alt. 1,350 m, 15-18.V.2010, coll. Wenhsin Lin & Xiaodong Yang (CCCC, with 1 ♂ in IZAS); 4♂♂, Jinping, Maandi, Luobodi [22°45'N 103°30'E], alt. 1,350 m, 16.V.2010, coll. Xiaodong Yang (CCCC, with 1 ♂ in IZAS); 2 ♂♂ 9 ♀♀, Xinping, Mt. Ailaoshan [24°14'N 101°19'E], 1–11.V.2006 (CTK).

Vietnam: 1 ♀, Tonkin [20°38'N 105°26'E], 1.VIII, coll. Jeanvoine (NMB, ex Coll. Frey); 2 ♂♂ 1 ♀, Tonkin, Dong-Van (MHNG, ex Coll. S. Breuning); 3 ♀♀, Ht. Tonkin, Dong-Van, 1898, coll. Capne Gadel (MNHN); 1 ♂ 3 ♀♀, Ht. Tonkin, N.O. de Bao-Lac, 1897–1898, coll. Dr. Battarel (MNHN); 1 ♂ 2 ♀♀, same data but (MHNL, ex Coll. Lepesme, 2002) ; 1 ♂, Ht. Tonkin, N. O. de Bao-Lac (NMNH ex Tippmann coll. 57 213112) [*Thermistis croceocincta* m. *reducta* det. by Breuning].

Laos: 1 ♀, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pan, [20°12'N 104°01'E], alt. 1,500–1,900 m, 17.V–3.VI.2007, coll. C. Holzschuh (CCH); 1 ♂ 1 ♀, same data but 21.IV–13.V.2008, coll. C. Holzschuh (IZAS, ex CCH); 1 ♂ 1 ♀, same data but 10–16.V.2009, coll. C. Holzschuh (CLYL, ex CCH); 1 ♂, Sam Nuea, Houa Phan prov., Ban Saluei (vil.) [20°13'N 104°01'E], alt. 1,200 m, 1.V.2003, coll. Tatsuya Niisato (CTN); 1 ♀, same data but alt. 1,300–1,600 m, 19.V.2005, coll. Takashi Kurihara (CTK); 6 ♀♀, NE Laos, Houa Phan prov., Phou Pan (Mt.) [20°13'N 104°00'E], alt. 1,350–1,500m, 1–16.VI.2009, coll. M. Brancucci (NMB); 3♂♂ 4 ♀♀, NE Laos, Houa Phan prov., Ban Saluei to Phou Pan (Mt.) [20°12–13.5'N 103°59.5'E–104°01'E], alt. 1,340–1,870m, 10.V–16.VI.2009, coll. M. Brancucci & local (NMB); 3 ♀♀, same data but 15.IV–15.V.2008, coll. Lao collector (NMB); 1 ♂, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pan, [20°11'N 104°01'E], 27.IV.2001 (EUMJ); 1 ♂, same data but alt. ca. 1,500–1,700m, 30.IV.2002, coll. N. Ohbayashi (EUMJ); 1 ♂, same data but alt. 1,500–1,700 m, 13.V.2002, coll. native collector (EUMJ, "Genitalia 4"); 2 ♀♀, same data but alt. ca. 1,500–1,700 m, 12–13.VIII. 2003, coll. H. Wakahara (CMH); 1 ♂, same data but alt. 1,500–1,800 m, 25.V.2004, coll. T. Tsuru (CTN); 1 ♀, same data but alt. ca. 1,500–1,800 m, 28–29.IV.2003, coll. Tatsuya Niisato (CTN); 3 ♀♀, same data but alt. ca. 1,500–1,800 m, 5.V.2002 (CTN);1 ♂, same data but 16.IV–15.V.2004, coll. H. Wakahara (CTN); 1 ♂, same data but 25.V.2002, coll. H. Wakahara (CMH); 2 ♂♂ 3 ♀♀, Xieng Khouang prov., Phou-Samsoun, [20°05'N 102°31'E], IV–VI.2006, coll. H. Wakahara (CTK).

Myanmar: 1 ♂ 1 ♀, Shan State, Taunggyi [20°47'N 97°03'E], 5–23.VI.2008 (CTK); 2 ♀♀, N. E. Myanmar, Kachin prov., Sikaw [23°49'N 97°04'E], 20.V–10.VI.2009, coll. native collector (CYO).

Remarks. This species is newly recorded from Fujian, Hainan and Yunnan of China, Tonkin of Vietnam, Houa Phan prov. and Xieng Khouang prov. of Laos,

Shan state and Kachin prov. of Myanmar. Breuning (1952) described a morph "*reducta*" of *T. croceocincta* from Tonkin. According to Article 45.6.2 of the International Code of Zoological Nomenclature, it is an infrasubspecific rank and should treat as an unavailable name. Therefore the valid name is "*xanthomelas*".

Thermistis sulphureonotata Pu 1984 (figs. 50–55, 67)

Thermistis sulphureonotata Pu 1984: 59, 61, fig. 1 (Guangxi). [IZAS]
Thermistis sulphureonotata: Zhou 1992: 99, 100, figure page 99.- Pesarini & Sabbadini 1999: 67.- Hua 2002: 235.- Hua, Nara, Saemulson & Lingafelter 2009: 469.- Löbl, *et al.* 2010: 332.

Supplementary description. Male: length: 26.5–28.0 mm, humeral width: 8.0–10.0 mm. Female: length: 23.5–38.0 mm, humeral width: 7.7–13.5 mm. Antennae longer than (male) or subequal to (female) body; antennomere ratio: male: 30:8:45:42:33:32:31:27:26:22:27; female: 22:5:35:31:24:23:22:20:18:16:14. Elytral apex emarginate, with a minute but perceptible tooth at the inner angle and a long and sharp spine at the outer angle.

Male terminalia (figs. 53–54). Tegmen length about 4.6 mm; lateral lobes slender, rather straightly tapered from basal one third to narrowly rounded apices, each about 0.9 mm long and 0.33 mm wide, ventral base of each lobe with two small lobes with fine hairs; median lobe plus median struts slightly curved, subequal to tegmen in length (47:46); the median struts about half of the whole median lobe in length; ventral plate roundly tapered to pointed apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites (fig. 53r), of which pair longer and thicker, 1.47 times as long as the short middle one; the middle one subseparated; 2 longer rods each about 2.5 mm, much shorter than tegmen. Tergite VIII (figs. 54a & 54c) trapezoidal, apex widely truncated, provided with median long setae along apical and lateral sides.

Female genitalia (fig. 55): Spermathecal capsule with a thin and curved basal stalk and a strongly curved apical lobe, the apical lobe kind of divided into three parts. Tignum much shorter than abdomen. In our observation, tignum 4.0 mm for an adult with a 9.0 mm abdomen in ventral view.

Diagnosis. This species is allied to *T. croceocincta*, however it differs from the latter in having the body larger, inferior eye lobe shorter than gena below it, terminal six segments of antennae with grayish-yellow pubescence, disc of pronotum with irregularly vermiculate ridges instead of deeply punctuate ridges, lateral area of elytra lacking coarse punctures and with marginal angles acutely spinate (Pu 1984).

Distribution. China (Guangxi); Laos (**new country record**), Vietnam (**new country record**).

Type specimen examined. Holotype, ♀, Guangxi, Longsheng [25°48'N 110°00'E], 18.VI.1963, coll. Qijing You (IZAS).

Other specimens examined. Guangxi: 1 ♀, Wuming, Wenmingshan [23°09'N 108°16'E], 24.V.1963, coll. Sikong Liu (IZAS); 1 ♂, Nanning, Wuming county, Mt. Damingshan [23°24'N 108°28'E], alt. 1200 m, 3.VII.2011, coll. Yanquan Lu (CWD); 1, same data but 08.VII.2011 (CCCC); 1, same data but 27.VI.2011, coll. Chao Li (CCCC); 1 ♂, Xing'an, Yongding [24°31'N 110°04'E], 17.VI.1990, coll. Lingjie Mao (IZAS).

Laos: 1 ♀, Sam Nuea, Houa Phan prov., Ban Saluei, Mt. Phou-Pan, [20°12'N 104°01'E], alt. 1,500-1,900 m, 17.V–3.VI.2007, coll. C. Holzschuh (CCH). [examined and identified by Carolus Holzschuh]

Vietnam: 2 ♂♂, North Vietnam, Tam Dao [21°30'N 105°36'E], V.2003 (CTK).

Thermistis rubromaculata Pu 1984 (figs. 56–60, 64)

Thermistis rubromaculata Pu 1984: 60, 61, fig. 2 (Guangxi). [IZAS]
Thermistis rubromaculata: Pesarini & Sabbadini 1999: 67.- Hua 2002: 235.- Hua, Nara, Saemulson & Lingafelter 2009: 469.- Löbl & Smetana 2010: 332.

First description of male and supplement description: Male (figs. 57a–p) length 21.5 mm from the tip of vertex to elytral apex, width 7.6 mm at elytral humeri. Color and maculation are almost same as female, ca 2.8 times as long as wide. Antenna slightly shorter than body length; relative lengths of segments from base to apex: 22:4:30:26:21:18:17:16:15:14:14.

Male terminalia (figs. 58–59). Tegmen length about 3.0 mm; lateral lobes slender, with rounded apex, each about 0.7 mm long and 0.22 mm wide, ventral base of each lobe with a finely haired ridge; median lobe plus median struts slightly curved, slight longer than tegmen (17:15); the median struts about half of the whole median lobe in length; ventral plate roundly tapered to rounded apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites, of which paired ones are long baculiform, 1.3 times as long as the short one; the short one is kind of sub-separated; 2 longer rods each about 1.8 mm, much shorter than tegmen. Tergite VIII (figs. 59a & 59c) trapezoidal, apex widely rounded with middle kind of emarginate, provided with median long setae along apical and lateral sides.

Female genitalia (fig. 60): Spermathecal capsule strongly curved. Tignum much shorter than abdomen. In our observation, tignum 4.5 mm for an adult with a 11.0 mm abdomen in ventral view.

Diagnosis. This species is distinguishable from *T. sulphureonotata* in having reddish- or yellowish-orange markings on dorsum instead of sulphury ones; pronotum with distinct oblong elevation before base, and disc furnished with strongly sinuous ridges; elytra shorter and marginal angles obtusely rounded instead of spinate (Pu 1984).

Distribution. China (Guangxi, Guizhou (**new province record**)).

Type specimen examined. Holotype, ♀, Guangxi, Jiuxiu county [24°07'N 110°11'E], 13.IX.1981, coll. Qijing You (IZAS).

Other specimens examined. Guangxi: 1 ♀, Jiuxiu, Yonghe village [24°12'N 110°16'E], alt. 500 m, 12.V.1999, coll. Decheng Yuan (IZAS). **Guizhou:** 1 ♂, Fanjingshan [27°54'N 108°42'E], 26.VI.2009, coll. Wenhsin Lin (CCCC).

Remarks. This species is recorded from Guizhou of China for the first time.

Thermistis cheni Lin & Chou n. sp. (figs. 61–63, 64)

Description. Male (figs. 61a–p). Length 24.0–26.0 mm, width 8.2–8.5 mm. Body ca 3.0 times as long as width; integument black except for clypeus, mandibles' base and those areas covered with reddish- or yellowish orange pubescence which are brown; surface of head, pronotum, elytra, tibiae and ventral surface densely covered by reddish- or yellowish-orange and black short recumbent pubescences, sparsely intermixing with pale yellow erect feeble hairs. Labrum provided with a transverse row of many orange brown long setae. Outer area of mandibles sparsely clothed with pale yellow short feeble hairs. Antenna densely clothed with fine recumbent short black pubescence, provided with long feeble hairs sparsely around scape and ventral side of second to ninth segments, but the hairs are getting sparser toward apical segments. Dorsum and ventral surface marked by reddish- or yellowish-orange pubescence as following manner. Head with a quadrate reddish-orange spot occupying most area of frons except a black spot in the middle of upper half. Pronotum with a transverse yellowish-orange marking on the anterior half, narrow in the middle and expanded over the lateral projections in both sides, extreme tip of lateral projections black. Each elytron with four reddish- or yellowish-orange markings: a basal one lozenge, reaching neither suture nor lateral margin; a moderate sized spot on the lateral side, closer to humerus than the basal one; an oblique middle band situated behind middle which is reaching both suture and lateral margin; an apical transverse spot separated both from suture and lateral margin. Mesosternal intercoxal process, most part of metasternum except small areas around metacoxa, narrow areas of sides of abdominal sternite IV and VII and large areas of sides of sternite V and VI closed with yellowish-orange pubescence. Legs black except the anterior sides of fore femora, posterior sides of mid and hind femora clothed with yellowish-orange pubescence; each tibia densely furnished ventrally with deep brown short suberect hairs; dorsum of tarsal segments densely clothed with fine recumbent short black pubescence intermixed with sparse long hairs.

Head slightly narrower than pronotum. Labrum invert trapezoidal with rounded angles, mat except for glossy apical area. Clypeus narrowly trapezoidal, glossy without punctures. Inferior eye lobe 2.0 times as deep as gena below it. Antenna with only last one segment surpassing the elytral apex; relative lengths of segments from base to apex: 28:6:37:31:25:24:23:21:19:18:20. Pronotum wider than long, 1.50 times as the width across lateral projection as long, provided with conical lateral tubercles of which the tips not sharp; disc convex, provided with deep punctures and a longitudinal tubercle on basal third. Prosternal process moderately constricted between procoxae, then steeply declined toward dilated apex. Procoxal cavities closed or slightly opened behind. Elytra 2.16 times as long as wide, straightly narrowed towards apical tenth, then roundly narrowed to rounded apices. Apical margin of abdominal sternite VII rounded, without a triangular notch at the middle. Apex of hind femur reaching apical margin of abdominal sternite V.

Female. Unknown.

Male terminalia (figs. 62–63): Tegmen length about 4.0 mm; lateral lobes obliquely tapered from apical 1/5 to rounded apices, each about 0.7 mm long and 0.3 mm wide, ventral base of each lobe with a vague ridge with fine setae; median lobe plus median struts slightly curved, subequal to tegmen in length (1:1); the median struts about half of the whole median lobe in length; ventral plate roundly tapered to rounded apex; median foramen extremely elongated; internal sac with 3 rod-like sclerites (figs. 62r1–62r3), of which paired ones are long baculiform, slightly longer than the middle short one; 2 longer rods each about 3.2 mm, much shorter than tegmen. Tergite VIII (figs. 63a & 63c) trapezoidal, apex widely truncated with middle somewhat emarginated, provided with median long setae along apical and lateral sides.

Diagnosis. This new species is most similar to *T. rubromaculata*, but can be easily distinguished from it by the elytral markings: middle area with only one obliquely transverse stripe instead of two separate spots.

Etymology. The specific epithet is dedicated to Mr. Changchin Chen who offer the beautiful materials and help the authors (Meiying Lin & Wen-I Chou) to study longhorn beetles in various ways.

Distribution. China (Sichuan, Yunnan).

Type specimens. Holotype, ♂ [26.0 mm long, 8.5 mm wide], **Yunnan**, Jinping county, Ma'andixiang, Biaoshuiyan [22°44'N 103°29'E], alt. 1,350 m, 17.V.2010, Wenhsin Lin (IZAS, ex CCCC, 2010). **Paratypes:** 1 ♂, **Sichuan**, Yingjing county, Sipingxiang, Nibashan [29°41'N 102°36'E], 26.VIII.2008, Xiaodong Yang (IZAS ex CCCC, 2010); 1 ♂, Sichuan, Yingjing county, Sanhexiang [29°46'N 102°31'E], 27.VII.2008 (CCCC); 1 ♂, Sichuan, Dayi, Xilingxueshan, Watan [30°38'N 103°10'E], alt. 1,450 m, 4.VIII.1999, coll. Wen-I Chou (CWIC).

Key to species of *Thermistis* Pascoe

1. Pubescent markings yellow **2**
- Pubescent markings reddish orange **10**
2. Antennae black with narrow white-grey annulations at apex and base of each segment **3**
- Antennae uniformly black, or with some segments clothed with appressed shining whitish pubescence **5**
3. Lateral yellow bands of prothorax extended from base to apex, but not covering the lateral spines (figs. 14–17). S. China, Laos, Myanmar ..... ***T. conjunctesignata*** **Rondon & Breuning**
- Lateral yellow bands of prothorax limited to the anterior portion of the lateral spines, the basal portion of lateral sides with black and grayish pubescence **4**
4. Elytral middle black marking extended to epipleuron (figs. 1–4). C. & S. China, Vietnam, Thailand, India, Himalaya ..... ***T. croceocincta*** **(Saunders)**
- Elytral middle black marking not extended to epipleuron (figs. 9–10). Hainan Island ..... ***T. hainanensis*** **Lin & Yang n. sp.**
5. Lateral yellow bands of prothorax extended from base to apex, but not covering the lateral spines **6**
- Lateral yellow bands of prothorax limited to the anterior portion of the lateral spines, the basal portion of lateral sides black or with grayish pubescence **8**
6. Yellow area on frons extends to occiput behind eyes (with yellow line behind eyes); elytral middle black marking large, longer than broad, not extended to epipleuron; antennae shorter (subequal in male, or shorter in female than body (figs. 35–36). S. China, Vietnam ..... ***T. nigromacula*** **Hua**
- Yellow area on frons not extends to occiput (without yellow line behind eyes); Elytral middle black marking transverse, extended to epipleuron; antennae longer than body **7**

7. Antennae with apical half of 8th to basal half of the last segments clothed with appressed shining whitish pubescence on dorsum; lateral conical tubercles of pronotum more developed with tips not directed backward (figs. 21–23). Taiwan Island ..... ***T. taiwanensis* Nara & Yu**

- Antennae uniformly black; lateral conical tubercles of pronotum more or less weaker with the tips slightly directed backward (figs. 29–30). Taiwan Island ..... ***T. kaiyuni* Chou & Kurihara n. sp.**

8. Elytra with outer apical angles uniformly rounded; yellow area on frons without black spot or black middle line; elytra with black areas much smaller than yellow areas (figs. 41–42). S.W. China ..... ***T. sagittifera* Pesarini & Sabbadini**

- Elytra with outer apical angles feebly or strongly spined; yellow area on frons with a black spot or a black middle line; elytra with black areas much larger than yellow areas **9**

9. Antennae relatively shorter, subequal in male, or shorter in female than body length, with sparse grayish pubescence, especially at basal segments; pronotal basal portion of lateral sides with grayish pubescence; elytral apex with a short tooth (figs. 43–45). S. China, Vietnam, Laos, Myanmar ..... ***T. xanthomelas* Holzschuh**

- Antennae relatively longer, longer in male, or shorter in female than body length, with 5th to the last segments (sometimes only last 4 segments) clothed with shining whitish pubescence; pronotal basal portion of lateral sides black, without grayish pubescence; elytral apex with long and sharp spine (figs. 50–52). S. China, Laos, Vietnam ..... ***T. sulphureonotata* Pu**

10. Each elytron with 5 pubescent maculae (including the basal one can only be seen in lateral view; figs. 56–57). W.S. China ..... ***T. rubromaculata* Pu**

- Each elytron with 4 pubescent maculae (including the basal one can only be seen in lateral view; figs. 61). W.S. China ..... ***T. cheni* Lin & Chou n. sp.**

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