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A checklist of known ant species of Laos (Hymenoptera: Formicidae)

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ABSTRACT. Laos is one of the most undersampled areas for ant biodiversity. We begin to address this knowledge gap by presenting the first checklist of Laotian ants. The list is based on a literature review and on specimens collected from several localities in Laos. In total, 123 species with three additional subspecies in 47 genera belonging to nine subfamilies are listed, including 62 species recorded for the first time in the country. Comparisons with neighboring countries suggest that this list is still very incomplete. The provincial distribution of ants within Laos also show that most species recorded are from Vientiane Province, the central part of Laos while the majority of other provinces have received very little, if any, ant sampling. Many ant specimens collected from Laos are awaiting identification and future collections should provide many new species records.

Keywords: Formicidae, ants, checklist, new records, Laos

INTRODUCTION

Laos People's Democratic Republic (Laos) is a landlocked country located in Southeast Asia which borders China, Vietnam, Myanmar, Cambodia and Thailand. Although ant faunas are now known to some extent in several areas in Southeast Asia (e.g. China: Guénard & Dunn 2012; Vietnam: Eguchi *et al.* 2011; Thailand: Jaitrong & Nabhitabhata 2005; Cambodia: Hosoishi *et al.* 2013; Borneo: Pfeiffer *et al.* 2011; Yunnan: Liu *et*

al. 2015), the ants of Laos are largely unknown. A recent global analysis of gaps in our knowledge of ant biodiversity identified Laos as one of the least known countries in the world (Guénard *et al.* 2012), thus placing it as a top priority for ant biodiversity research. Santschi (1920b) first reported 28 ant species from several localities in this country. Over the following century, only a few species of ants have been described and added in the country (e.g. Ward 2001; Dill 2002; Roncin & Deharveng 2003; Bolton 2007;

Jaitrong *et al.* 2011; Yamane & Jaitrong 2011; Jaitrong & Yamane 2013; Laciny *et al.* 2015; Hosoiishi & Ogata 2016); and currently, only 61 species have been listed.

We sought to increase knowledge of the ant fauna in Laos by compiling data on ant geographic distributions from a review of literature, and through new field surveys during 1997-2015. With this material we present the first preliminary checklist of the known ant species from the country in order to encourage future research on ants and biodiversity conservation in the region.

MATERIALS AND METHODS

The checklist was assembled through literature/data compilation, in addition to new field surveys. The data compilation included records from the GABI database, which includes data from over 8670 publications and other existing databases (e.g. Antweb 2015), with species distribution available for visualization through the website antmaps.org (Janicki *et al.* 2016). Separately, information given by other websites available (e.g. Antwiki) were also added here.

In addition, an extensive collection was acquired from several localities in Laos which are now deposited in the Natural History Museum of National Science Museum, Thailand (THNHM) and Seiki Yamane's Collection at Kitakyushu Museum of Natural History and Human History, Japan (SKYC). Most specimens were collected by Weeyawat Jaitrong and Seiki Yamane from two sites within Vientiane Province during May and June 2010. The first site was in Sivilay Village (18°15'N, 102°27'E, ca. 200 m alt.), Naxaythong District, located approximately 20 km northwest of Vientiane City. The second site was in Phang Dang Village (18°14'N, 103°01'E, ca. 500 m alt.), Pak Ngum District, approximately 30 km northeast of Vientiane City. Specimens collected in various parts of the country by Mr. Haruo Fukuda and Dr. Yukino Ochiai were also examined. The specimens were identified by W. Jaitrong and Sk. Yamane using identification keys created for other Southeast Asian ants (e.g. Ward 2001; Bolton 2007; Eguchi 2008; Hosoiishi & Ogata 2009a; Jaitrong & Yamane 2011; Jaitrong *et al.* 2011; Schmidt & Shattuck 2014;

Hosoiishi & Ogata 2016). Furthermore, Dr. Stefan P. Cover of the Museum of Comparative Zoology, Cambridge, Massachusetts, U.S.A. (MCZC) kindly offered us records of specimens of some species collected by David Pick in Laos that were identified and managed by Dr. Cover.

Supposed biological species (not identified as known species) are not included in the list. Species validity, spelling and authority have been checked in Bolton's Synopsis of the Formicidae and Catalogue of Ants of the World (Bolton 2015). The list is arranged alphabetically by subfamily, genus and species. Material examined and distributions are given for the listed species. The species previously recorded from Laos are marked with “*”.

RESULTS AND DISCUSSION

In the present paper, 123 named species and additional three subspecies are listed for 47 genera belonging to nine subfamilies from Laos (Table 1). Among them, 62 species are recorded for the first time in the country. The most speciose subfamily is the Myrmicinae with around 37 percent of all genera and 30 percent of all species, followed by Formicinae, Ponerinae, Dolichoderinae and Dorylinae respectively (see Table 1). Worldwide, currently 16 subfamilies, 327 genera and 15,050 species are known in Formicidae, excluding fossil taxa (Bolton, 2015). Thus, to date the record in Laos covers only 0.8 percent of all known ant species in the world, though this may in part be a result of the incompleteness of investigation. Our material contains many other species identified only at the genus level; and thus the number of species is likely to increase once these are identified. The genera collected for which no species could be identified are: *Aphaenogaster*, *Calyptomymex*, *Hypoponera*, *Nylanderia*, *Paraparatrechina*, *Philidris*, *Plagiolepis*, *Prenolepis*, *Pseudolasius*, *Rhopalomas-tix*, *Strumigenys* and *Vollenhovia*. As a result, 58 genera have been recorded from Laos for now. Many other genera widespread in the region (e.g. *Acanthomyrmex*, *Buniapone*, *Chronoxenus*, *Cryptopone*, *Dilobocondyla*, *Discothyrea*, *Emeryopone*, *Gauromymex*, *Gesomymex*, *Kartidris*, *Lepisiota*, *Leptanilla*, *Lordomyrma*,

Table 1. Numbers and percentages of named species and genera recorded for each subfamily from Laos.

Subfamilies	No. of genera	%	No. of species	%
Amblyoponinae	1	2.2	1	0.8
Dolichoderinae	4	8.7	13	10.6
Dorylinae	3	6.5	10	8.1
Ectatomminae	1	2.2	2	1.6
Formicinae	7	15.2	33	26.8
Myrmicinae	17	37.0	37	30.0
Ponerinae	11	23.9	20	16.3
Proceratiinae	1	2.2	1	0.8
Pseudomyrmecinae	1	2.2	6	4.9
Total	46	100	123	100

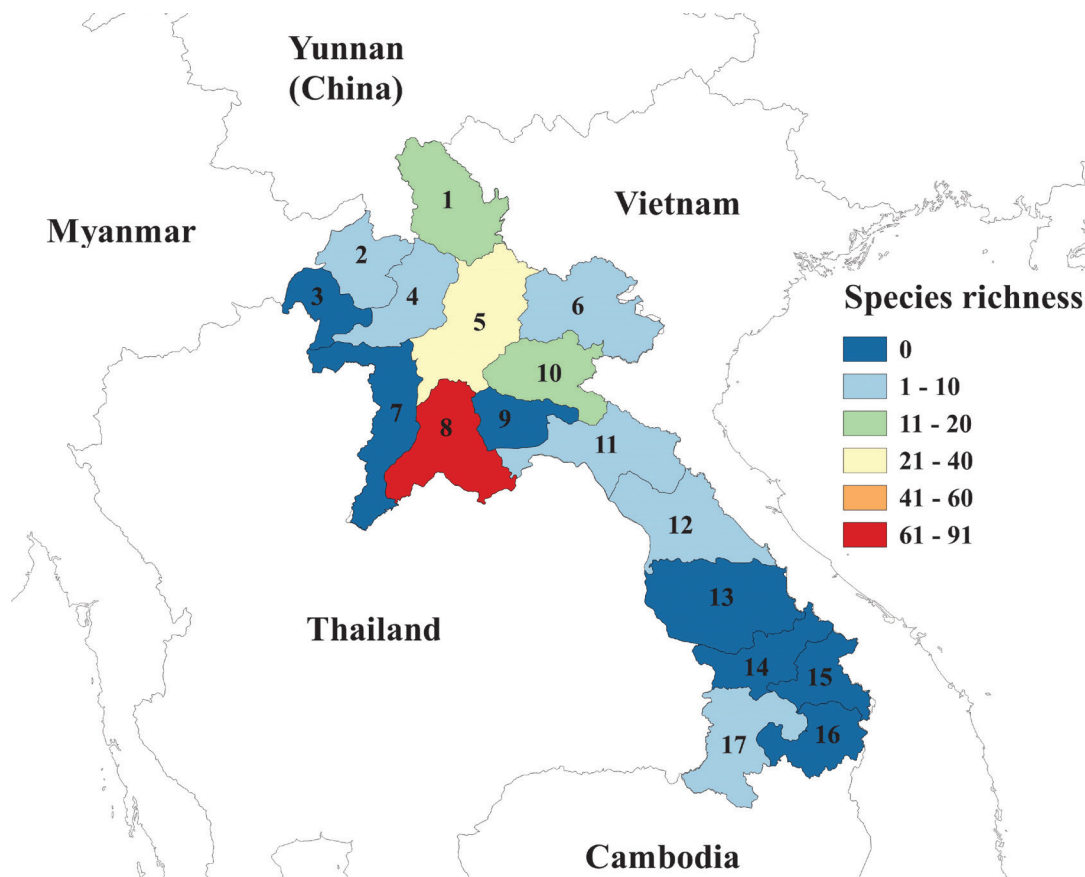


Fig. 1. Known species diversity in the eighteen Laotian provinces: 1) Phongsali, 2) Luang Namtha, 3) Bokeo, 4) Oudomxay, 5) Luang Prabang, 6) Houaphan, 7) Sayabouly, 8) Vientiane capital & province, 9) Xaisomboun, 10) Xieng Khouang, 11) Bolikgamsai, 12) Khammouane, 13) Savannakhet, 14) Salavan, 15) Sekong, 16) Attapeu, 17) Champasak.

Mesoponera, *Myopias*, *Myrmecina*, *Myrmicaria*, *Myrmoteras*, *Mystrium*, *Parvaponera*, *Ponera*, *Proatta*, *Proceratium*, *Simopone*, *Stigmatomma*, *Syllophopsis*, *Vombisidris*) are expected in Laos. The predicted final figure for Laos is between 64 and 78 genera, based on an earlier study by Guénard and collaborators. (2012).

The most speciose and commonly encountered genera are *Polyrhachis* (19 species), *Camponotus* (8), *Aenictus* (7), *Crematogaster* (7), *Tetramorium* (6), *Dolichoderus* (5), *Techomyrmex* (5), *Carebara* (5), *Pheidole* (5) and *Tetraoponera* (5). Together, the ten most diverse genera include 59 percent of the known species from Laos. Twenty-seven genera (59%) are so far represented in Laos by a single species. There are some genera with large numbers of Lao species (according to the specimens deposited in THNHM and SKYC), but most of these remain unknown, as they have not been studied in detail and identified yet, and therefore are not represented in this paper. For instance, *Camponotus*, *Pheidole*, *Tetramorium* and *Monomorium* all have several unidentified species.

Santschi (1920b) recorded *Odontoponera transversa* (F. Smith, 1857) from Lad-Hom and Luang Prabang, Laos. According to Yamane (2009), this species is confined to Sundaland, i.e., Borneo, Java, Sumatra, Singapore and Malay Peninsula (including southern Thailand). *Odontoponera denticulata* has a wider distribution, ranging from the Philippines, through Sundaland to continental Southeast Asia such as Thailand, Myanmar, Vietnam, Laos, S. China, Bangladesh, India and Pakistan (Eguchi *et al.* 2005; Hannan 2007; Jaitrong & Nabhitabhata 2005; Yamane *et al.* 2003). Thus Lao specimens (Lat-Hom and Luang Prabang) cited as *O. transversa* in Santschi (1920b) should be identified as *O. denticulata*.

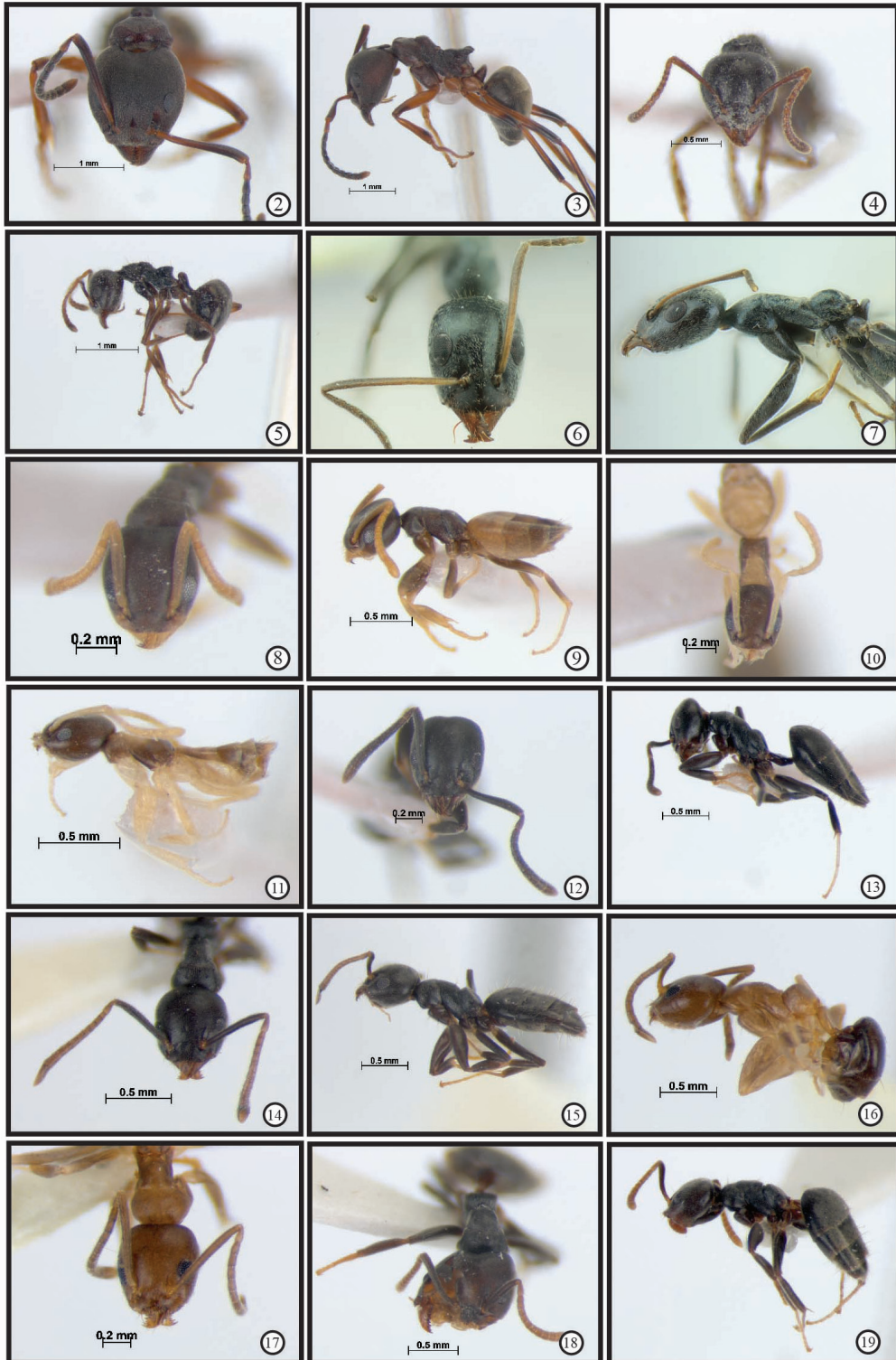
Over 80 percent of the known ant species from Laos are common in Southeast Asia. There are a few species, e.g. *Carebara petulens* (Santschi 1920), *Dolichoderus brevis* Santschi, 1920, *Polyrhachis emmae* Santschi, 1920 and *Leptogenys khammouanensis* Roncin et Deharveng, 2003, that thus far can be considered as endemic to Laos. Some species which to date have been recorded only from regions adjacent to Laos might occur in the country, but they are omitted from the list because their presence has

not been confirmed. For example, the common species, e.g. *Monomorium chinense* Santschi, 1925, *Ectomyrmex astuta* (F. Smith, 1858) (= *Pachycondyla astuta*), and *Pheidole pieli* Santschi, 1925, are recorded from China, Vietnam and Thailand (Eguchi *et al.* 2005; Jaitrong & Nabhitabhata 2005; Guénard & Dunn 2012), but not from Laos. However, it is likely that this distribution gap exists due to incompleteness of sampling in the country.

In the ant collections of THNHM and SKYC, we recognized about 70 unidentified species from Laos, some of which seem to be new to science; a new species of *Calyptomyrmex* will be described soon (Jaitrong & Yamane, *in prep.*). Specimens of some genera, e.g., *Nylanderia*, *Pholidris*, *Paraparatrechina*, *Hypoponera*, *Vollenhovia* and *Strumigenys*, have not yet been identified to species.

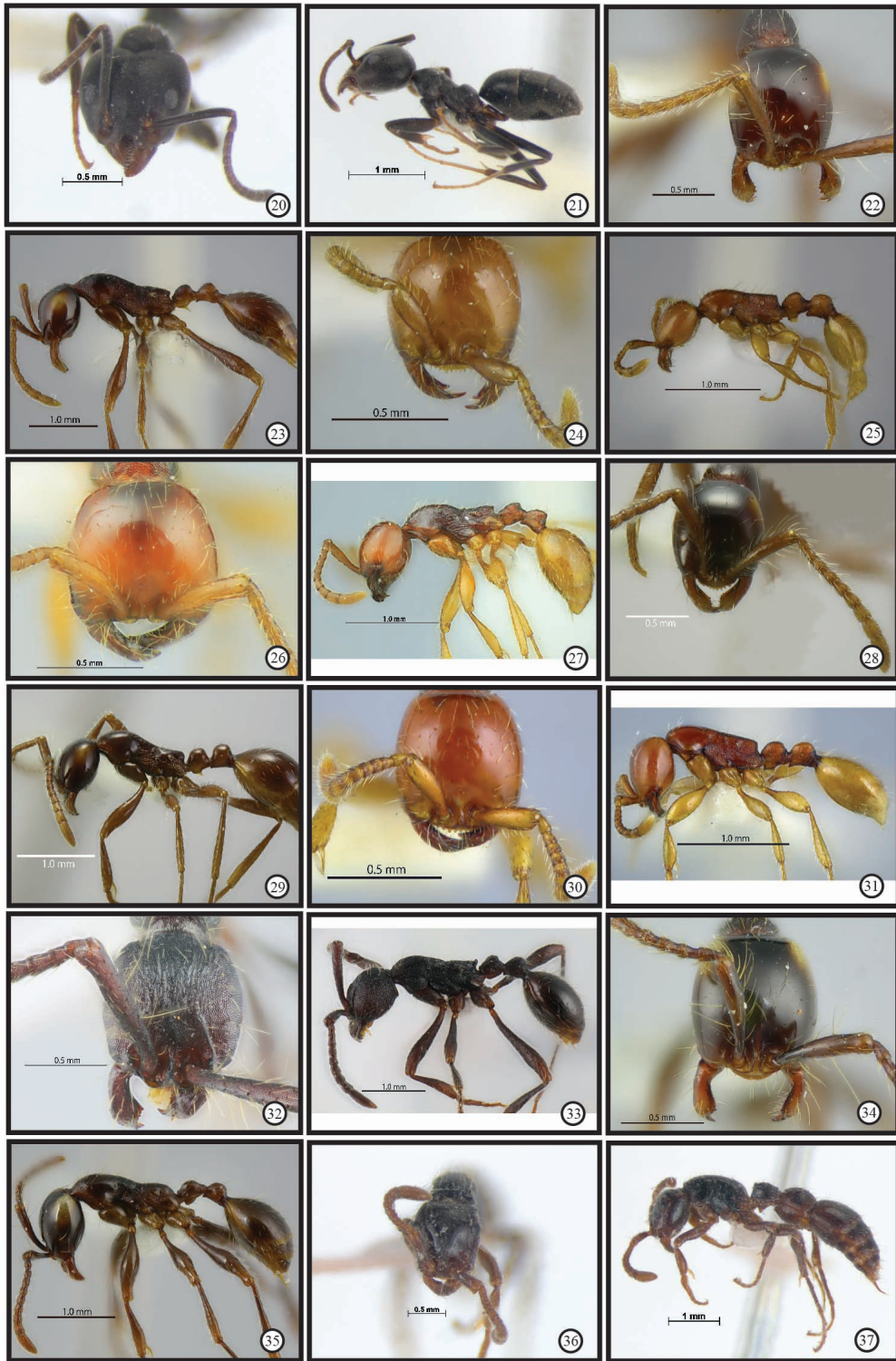
The under-sampling in the country is particularly striking at the provincial level. Among the 18 provinces of Laos, seven regions have no ant records and six more have fewer than 10 records. The “best” sampled province, Vientiane, has only 91 recorded species, while the second best-sampled province, Luang Prabang, has only 34 (Fig. 1). These results show that the entire country is highly undersampled with virtually no sampling efforts for the southern and the northwestern regions in particular. Yet, in light of the ant species richness found in neighboring regions (e.g. Vietnam: Eguchi *et al.* 2011, 2014; Yunnan province in China: Liu *et al.* 2015), many more species than mentioned in this paper (123+70) should be recognized in Laos in the future.

We carefully studied all the ant specimens collected by us from Laos. However, we present here only a first checklist of known species while intensive surveys are being planned. Future work performed in Laos should greatly expand the knowledge on ant diversity in this country. New intensive surveys of Laos are planned during 2016-2018 by Weeyawat Jaitrong and Seiki Yamane, which should help address this gap in knowledge. Without a doubt, many species and distribution records as well as biological information on ants from the country will increase knowledge beyond the initial checklist presented here.



Figs 2 – 19. 2-3, *Dolichoderus laotius*; 4-5, *Dolichoderus thoracicus*; 6-7, *Iridomyrmex anceps*; 8-9, *Tapinoma indicum*; 10-11, *Tapinoma melanocephalum*; 12-13, *Technomyrmex albipes*; 14-15, *Technomyrmex difficilis*; 16-17, *Technomyrmex kraepelini*; 18-19, *Technomyrmex modiglianii*.

Checklist of species**AMBLYOPONINAE** [1 genus, 1 species]***Myopopone castanea* (F. Smith, 1860b)*****Material examined.** None.**Distribution in Laos.** No further records (Santschi 1920b: 3; referred to as *M. mulleri* Bingh.)**DOLICHODERINAE** [4 genera, 13 species]***Dolichoderus affinis* Emery, 1889*****Material examined.** None.**Distribution in Laos.** Muong Pek (Santschi 1920b: 169, as *Dolichoderus affinis* var. *nigricans*, synonym of *D. affinis*).***Dolichoderus brevis* Santschi, 1920b*****Material examined.** None.**Distribution in Laos.** Vientiane (Santschi 1920b: 167) and Luang Prabang (Santschi 1920b: 167; Dill & Maschwitz 2002: 62).***Dolichoderus laotius* Santschi, 1920b*** (Figs 2-3)**Material examined.** Vientiane: Pak Ngum Dist., 300 m alt., Phang Dang Village, 12.VI.2010, Sk. Yamane leg. (SKYC).**Distribution in Laos.** Luang Prabang (Santschi 1920b: 170; Dill & Maschwitz 2002: 46), Muong Nya (Santschi 1920b: 170; Dill & Maschwitz 2002: 46), Hah Sampong (Dill & Maschwitz 2002: 46), Vientiane (new record).***Dolichoderus taprobanae* F. Smith, 1858*****Material examined.** None.**Distribution in Laos.** Muong Pek (Santschi, 1920b: 169, as *Dolichoderus taprobanae* var. *obscuripes*, synonym of *D. taprobanae*).***Dolichoderus thoracicus* (F. Smith, 1860a)*** (Figs 4-5)**Material examined.** Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-102 (THNHM); same loc., 12.VI.2010, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-99 (THNHM); same loc., 9.VI.2010, W. Jaitrong leg., WJT10-LAO-40 (SKYC, THNHM); same loc., 9.VI.2010, Sk. Yamane leg., LA10-SKY-004 (THNHM, SKYC); Tangon, 22.III.1998, H. Fukuda (SKYC). **Vang Vieng:** 10.III.1997, H. Fu-kuda leg. (SKYC, THNHM). **Phong Sali:** Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC); Khoa dist., 1,600 m alt., 23.XII.2015, Y. Ochiai, LA15/16-YO-01 (SKYC). **Bolikhamsay:** Lak Sao (600-700 m alt.), 2.IV.1988, H. Fukuda leg. (SKYC). **Luang Prabang:** Kuangsi Waterfall Park, 16.XII.2015, W. Jaitrong leg. (THNHM).**Distribution in Laos.** Muong Pek (Santschi 1920b: 169, as *Dolichoderus bituberculatus* var. *emarginata* synonym of *D. thoracicus*); Phong Sali, Bolikhamsay, Vientiane, Vang Vieng, Luang Prabang (new record) and Xieng Khouang (Yoshitomi *et al.* 2014).***Iridomyrmex anceps* (Roger, 1863)** (Figs 6-7)**Material examined.** Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (SKYC, THNHM). **Oudomxay:** Namong Dist., Mai, III.2006, Y. Ochiai leg.**Distribution in Laos.** Oudomxay and Vientiane (new record).***Tapinoma indicum* Forel, 1895** (Figs 8-9)**Material examined.** Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-48 (THNHM, SKYC); same loc., 9.VI.2010, Sk. Yamane leg., LA10-SKY-018 (THNHM, SKYC); Somnuek Guesthouse, 3.VII.2012, D. Pick leg., #347 (MCZC). **Phong Sali:** Huei Pee (1000 m alt.), 19.VIII.2004, Y. Ochiai leg. (SKYC); Phongsali Hotel, 15.VIII.2012, D. Pick leg., #348 (MCZC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-005 (THNHM).**Distribution in Laos.** Luang Prabang, Phong Sali and Vientiane (new record).***Tapinoma melanocephalum* (Fabricius, 1793)** (Figs 10-11)**Material examined.** Vientiane, 24.VIII.2003, Y. Ochiai leg. (SKYC); Pak Ngum Dist., Phang Dang Village, 14.VI.2010, Sk. Yamane leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-126 (THNHM, SKYC).**Distribution in Laos.** Vientiane (new record).***Technomyrmex albipes* (F. Smith, 1861)*** (Figs 12-13)**Material examined.** Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk.



Figs 20 – 37. 20-21, *Technomyrmex yamanei*; 22-23, *Aenictus binghami*; 24-25, *Aenictus doydeei*; 26-27, *Aenictus fuchuanensis*; 28-29, *Aenictus hodgsoni*; 30-31, *Aenictus nishimurai*; 32-33, *Aenictus paracentatus*; 34-35, *Aenictus parahuonicus*; 36-37, *Cerapachys sulcinodis*.

Yamane leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-95 (THNHM, SKYC); same loc., 11.VI.2010, Sk. Yamane leg., ex dead twig, LA10-SKY-083 (THNHM, SKYC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-006 (THNHM).

Distribution in Laos. Vientiane and Luang Prabang (new record), Xieng Khouang (Yoshitomi *et al.* 2014).

***Technomyrmex difficilis* Forel, 1892a** (Figs 14-15)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 170 m alt., 14.VI.2010, Sk. Yamane leg., LA10-SKY-121 (THNHM, SKYC); Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg., WJT10-LAO-206 (THNHM, SKYC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-003 (THNHM).

Distribution in Laos. Vientiane and Luang Prabang (new record).

***Technomyrmex kraepelini* Forel, 1905** (Figs 16-17)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, Sk. Yamane leg. (THNHM, SKYC); same loc., 14.VI.2010, W. Jaitrong leg. (SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record).

Technomyrmex modiglianii* Emery, 1900 (Figs 18-19)

Material examined. Bolikhamxay: Lak Sao, 6.III.1997, H. Fukuda leg. (THNHM, SKYC).

Distribution in Laos. Bolikhamxay (Bolton 2007: 92).

***Technomyrmex yamanei* Bolton, 2007** (Figs 20-21)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-69 (THNHM, SKYC); same loc., WJT10-LAO-71 (THNHM, SKYC); same loc., 7.V.2010, W. Jaitrong leg., WJT10-LAO-236 (THNHM); same loc., 10.VI.2010, Sk. Yamane leg., LA10-SKY-033 (THNHM, SKYC); same data., LA10-SKY-034 (SKYC); same data, ex bamboo stem, nest in soil, LA10-SKY-039

(SKYC); same data, nest in soil, LA10-SKY 043 (SKYC); same data, night walk, LA10-SKY 063 (SKYC); same data, LA10-SKY 069 (SKYC). **Phong Sali:** Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC).

Distribution in Laos. Phong Sali and Vientiane (new record).

DORYLINA [3 genera, 10 species]

Aenictus binghami* Forel, 1900a (Figs 22-23)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-15 (THNHM, SKYC); same loc. and date, Sk. Yamane, LA10-SKY-104 (THNHM, SKYC); same loc., 13.VI.2010, W. Jaitrong leg., WJT10-LAO-18 (THNHM).

Distribution in Laos. Vientiane (Jaitrong *et al.* 2011: 318; Jaitrong & Yamane 2011: 25).

Aenictus doydeei* Jaitrong et Yamane, 2011 (Figs 24-25)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-13 (type series, THNHM, SKYC); same loc. and date, Sk. Yamane, night walk, LA10-SKY-056 (type series, THNHM, SKYC).

Distribution in Laos. Vientiane (Jaitrong *et al.* 2011: 319; Jaitrong & Yamane 2012: 53).

Aenictus fuchuanensis* Zhou, 2001 (Figs 26-27)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, Sk. Yamane leg., LA10-SKY-058 (THNHM, SKYC).

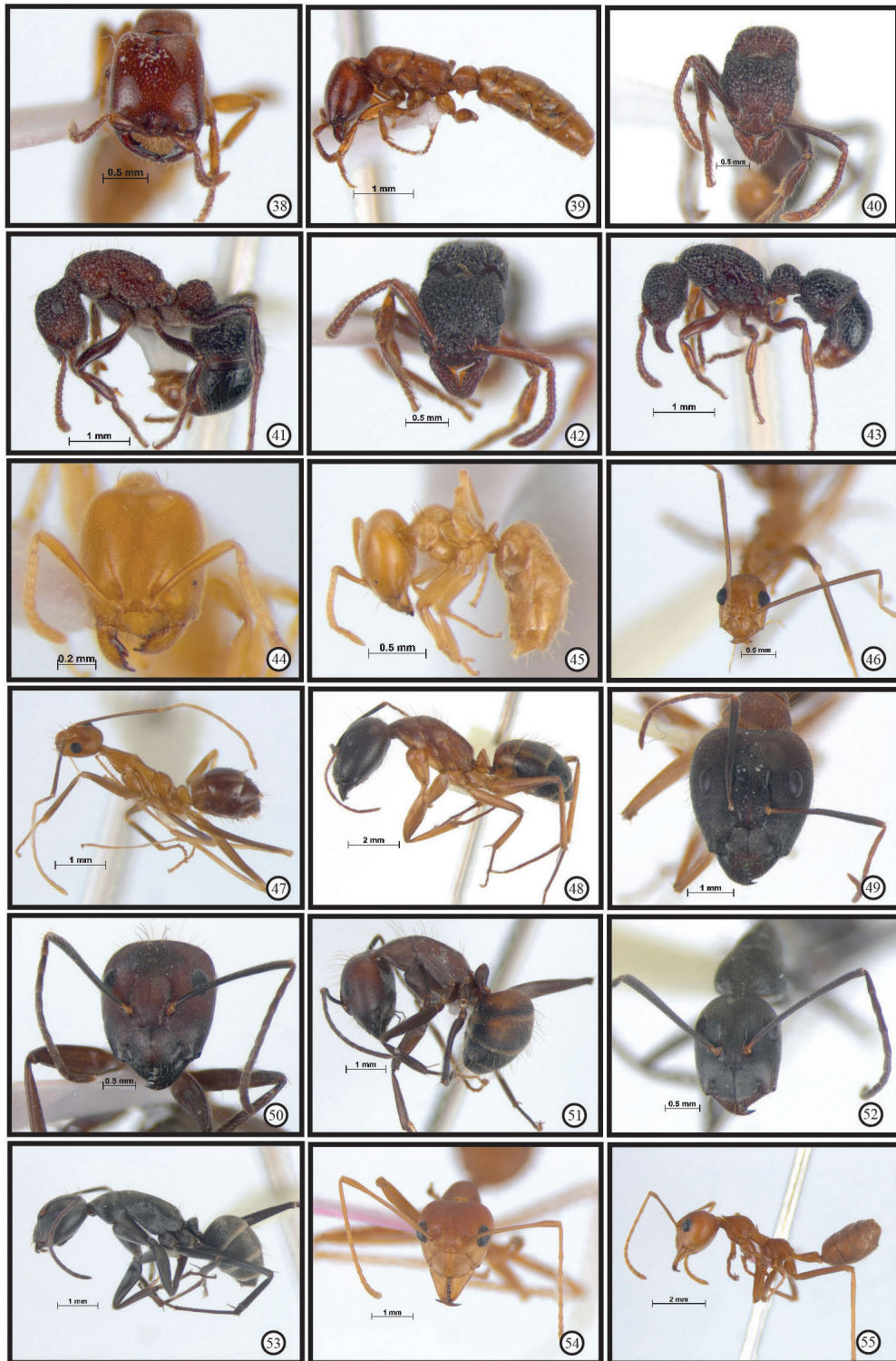
Distribution in Laos. Vientiane (Jaitrong & Yamane 2012: 187).

Aenictus hodgsoni* Forel, 1901 (Figs 28-29)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-11 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., LA10-SKY-007 (THNHM, SKYC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-001 (THNHM).

Distribution in Laos. Vientiane (Jaitrong *et al.* 2011: 321; Jaitrong & Yamane 2011: 35) and Luang Prabang (new record).

Aenictus nishimurai* Terayama et Kubota, 1993 (Figs 30-31)



Figs 38 – 55. 38-39, *Dorylus orientalis*; 40-41, *Gnamptogenys bicolor*; 42-43, *Gnamptogenys binghamii*; 44-45, *Acropyga butteli*; 46-47, *Anoplolepis gracilipes*; 48-49, *Camponotus carin*; 50-51, *Camponotus nicobarensis*; 52-53, *Camponotus rufoglaucus*; 54-55, *Oecophylla smaragdina*.

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-19 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., LA10-SKY-129 (THNHM, SKYC).

Distribution in Laos. Vientiane (Jaitrong *et al.* 2011: 321; Jaitrong & Yamane 2012: 61).

Aenictus paradentatus* Jaitrong et Yamane, 2012 (Figs 32-33)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-16 (THNHM); same loc., 14.VI.2010, WJT10-LAO-20 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., LA10-SKY-126 (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-12 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., (THNHM, SKYC).

Distribution in Laos. Vientiane (Jaitrong *et al.* 2012: 136).

Aenictus parahuonicus* Jaitrong et Yamane, 2011 (Figs 34-35)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-10 (THNHM); same loc. and date, Sk. Yamane, night walk, LA10-SKY-028 (THNHM, SKYC).

Distribution in Laos. Vientiane (Jaitrong & Yamane 2011: 19).

***Cerapachys sulcinodis* Emery, 1889** (Figs 36-37)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, W. Jaitrong leg., WJT10-LAO-107 (THNHM, SKYC); same loc. and date, Sk. Yamane, LA10-SKY-095 (SKYC).

Distribution in Laos. Vientiane (new record).

Dorylus laevigatus* F. Smith, 1857

Material examined. None.

Distribution in Laos. Luang Prabang (Santschi 1920b: 160).

***Dorylus orientalis* Westwood, 1835** (Figs 38-39)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-54 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., LA10-SKY-035 (SKYC).

Distribution in Laos. Vientiane (new record).

ECTATOMMINAE [1 genus, 2 species]

***Gnamptogenys bicolor* (Emery, 1889)** (Figs 40-41)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, Sk. Yamane (SKYC).

Distribution in Laos. Vientiane (new record).

***Gnamptogenys binghamii* (Forel, 1900b)** (Figs 42-43)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg., WJT10-LAO-131 (THNHM, SKYC); same loc. and date, Sk. Yamane, rotting wood, LA10-SKY-117 (SKYC); Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-250 (THNHM, SKYC). Phong Sali, Muang Khoua, 22-24.VIII.2005, Y. Ochiai (SKYC).

Distribution in Laos. Phong Sali and Vientiane (new record).

FORMICINAE [8 genera, 32 species, 1 sub-species]

***Acropyga butteli* Forel, 1912** (Figs 44-45)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg., WJT10-LAO-143 (THNHM, SKYC); same loc., 14.VI.2010, Sk. Yamane leg., LA10-SKY-134 (SKYC).

Distribution in Laos. Vientiane (new record).

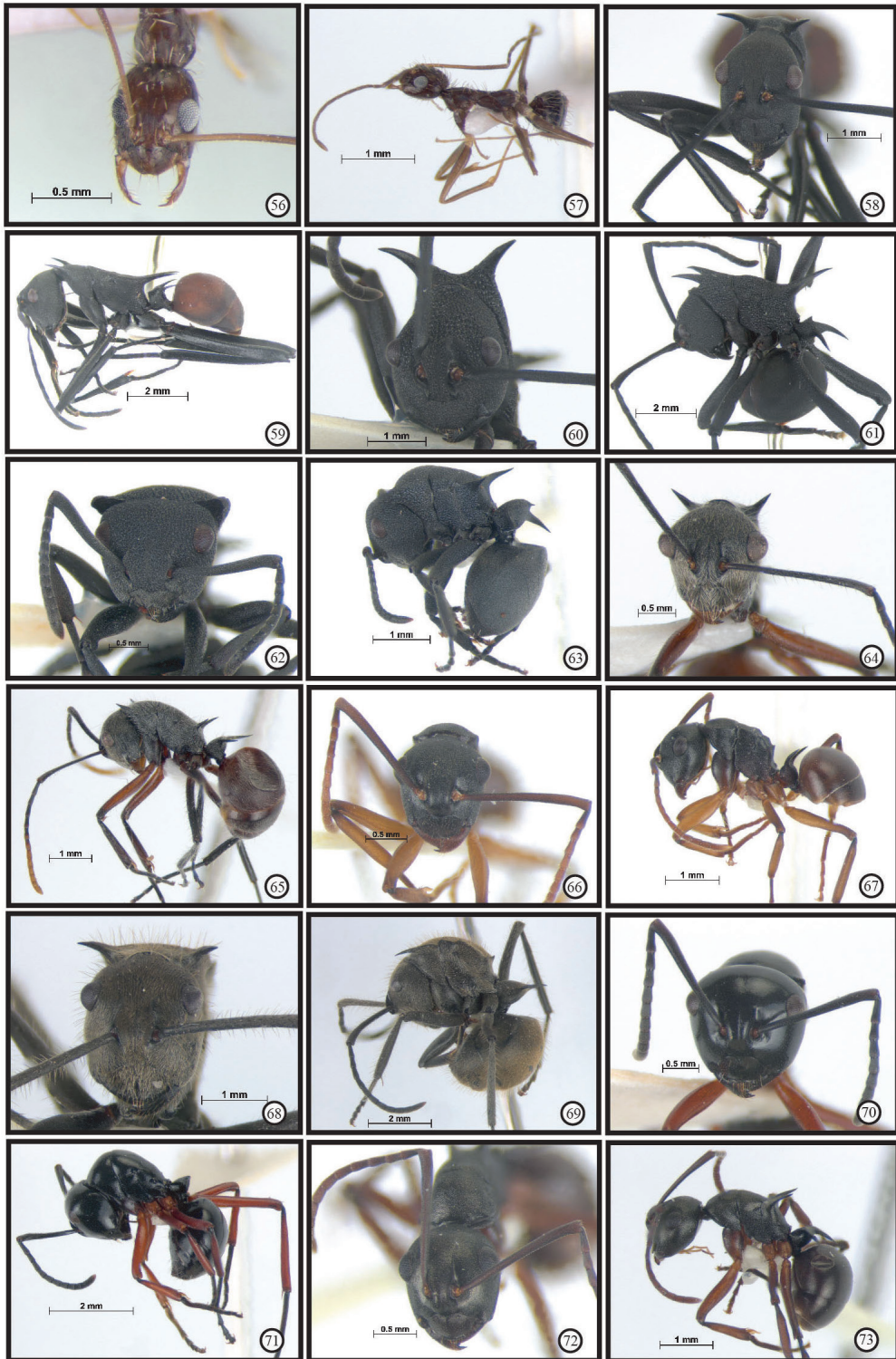
***Anoplolepis gracilipes* (F. Smith, 1857)** (Figs 46-47)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg. (THNHM); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg. (SKYC); vicinity of Vientiane, 5.V.1997, H. Fukuda leg. (SKYC). **Phong Sali:** Phong-sali Hotel, 15.VIII.2012, D. Pick leg., #348 (MCZC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg. (THNHM); Luang Prabang City, 290 m alt., 03.I.2016, Y. Ochiai leg. (SKYC).

Distribution in Laos. Vientiane, Phong Sali and Luang Prabang (new record).

***Camponotus camelinus* (F. Smith, 1857)**

Material examined. Oudomxay: Namo Dist., Mai Naatan, 950 m alt., 21-26.VIII.2004, Y. Ochiai leg. (THNHM, SKYC).



Figs 56 – 73. 56-57, *Paratrechina longicornis*; 58-59, *Polyrhachis abdominalis*; 60-61, *Polyrhachis armata*; 62-63, *Polyrhachis cryptoceroides*; 64-65, *Polyrhachis dives*; 66-67, *Polyrhachis flavicornis*; 68-69, *Polyrhachis illaudata*; 70-71, *Polyrhachis laevisissima*; 72-73, *Polyrhachis phalerata*.

Phong Sali: Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC).

Distribution in Laos. Oudoxmai and Phong Sali (new record).

***Camponotus carin* Emery, 1889** (Figs 48-49)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-117 (THNHM); same loc. and date, Sk. Yamane leg., LA10-SKY-107 (SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg., nest in soil, LA10-SKY-006 (SKYC); same loc., 10.VI.2010, W. Jaitrong leg., WJT10-LAO-92 (THNHM, SKYC); same loc., 11.VI.2010, Sk. Yamane, ex termite mound (LA10-SKY-073); same loc., 7.V.2010, W. Jaitrong leg., WJT10-LAO-229 (THNHM, SKYC); same loc., 9.VI.2010, W. Jaitrong leg., WJT10-LAO-36 (THNHM, SKYC); same loc., 10.VI.2010, W. Jaitrong leg., WJT10-LAO-72 (THNHM, SKYC); Sadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg., WJT10-LAO-204 (THNHM).

Oudomxay: Namo Dist., Mai Naatan (950 m alt.), 21-26.VIII.2004, Y. Ochiai (SKYC).

Distribution in Laos. Oudoxmai and Vientiane (new record).

Camponotus dolendus* Forel, 1892b

Material examined. None.

Distribution in Laos. Thatom (Santschi 1920b: 174).

***Camponotus nicobarensis* Mayr, 1865** (Figs 50-51)

Material examined. Bolikhamxay: W. foot of Annamite Range nr Vientiane, 8.V.1997, H. Fukuda leg. (SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-68 (THNHM, SKYC); same loc. and date, Sk. Yamane leg. (SKYC).

Phong Sali: Muang Khoua, 22-24.VIII.2005, Y. Ochiai (SKYC).

Distribution in Laos. Bolikhamxay, Phong Sali and Vientiane (new record).

Camponotus parius* Emery, 1889

Material examined. None.

Distribution in Laos. Vientiane (Santschi 1924: 22, cited as *Camponotus rufoglaucus paria*).

Camponotus rufoglaucus* (Jerdon, 1851) (Figs 52-53)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12-13.VI.2010, Sk. Yamane leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, Sk. Yamane leg. (SKYC); same loc., 11.VI.2010, W. Jaitrong leg. (THNHM). **Phong Sali:** Khoua, 1000 m alt., 18.VIII.2004, Y. Ochiai leg. (SKYC).

Distribution in Laos. Phong Sali, Vientiane (new record) and Xieng Khouang (Yoshitomi *et al.* 2014).

Remarks. No taxonomic revision is available on the *C. rufoglaucus* group (*Myrmosericus*) in continental Asia. According to Bingham (1903) *C. dolendus* is a highland species, while *C. rufoglaucus* and *C. parius* occur in lower elevations and found together. We have applied the name *rufoglaucus* to the populations of continental Asia, adopting a wider concept of *rufoglaucus*. Careful comparison of all the castes and sexes is needed to evaluate the status of these three forms.

Camponotus singularis* (F. Smith, 1858)

Material examined. Oudomxay: Namo Dist., Mai Naatan, 950 m alt., 21-26.VIII.2004, Y. Ochiai leg. (SKYC). **Phong Sali:** Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC).

Distribution in Laos. Luang Prabang (Santschi 1920b: 174, as *Camponotus camelinus* var. *singularis*); Oudomxay and Phong Sali (new record).

Camponotus variegatus fuscithorax* Dalla Torre, 1893

Material examined. None.

Distribution in Laos. Luang Prabang [Pak Vet] (Santschi 1920b: 173), Pak-Vet (Santschi 1924: 22).

Camponotus variegatus proles* Emery, 1925

Material examined. None.

Distribution in Laos. Luang Prabang (Santschi 1920b: 173; Emery 1925: 96).

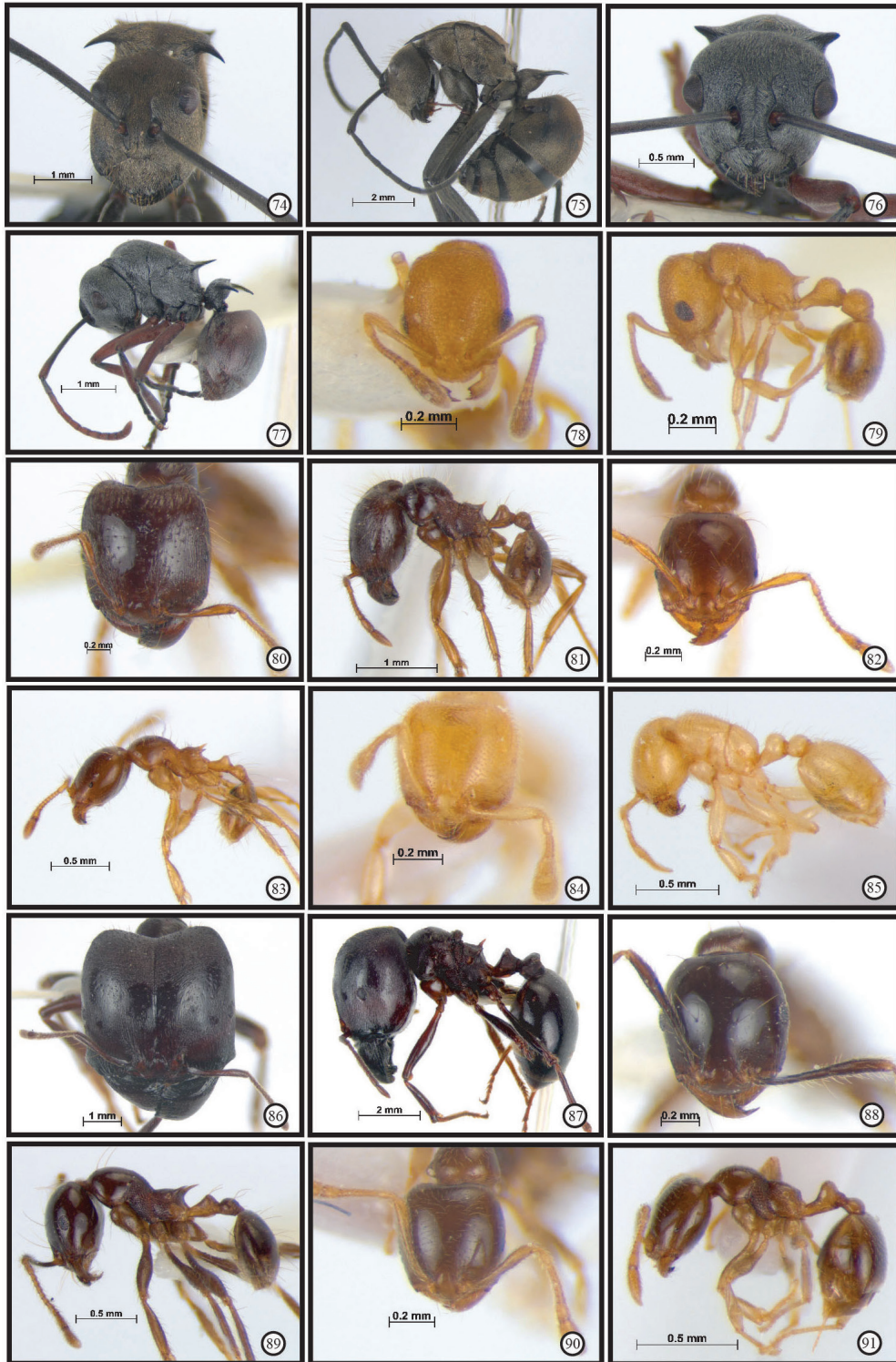
***Colobopsis leonardi* Emery, 1889**

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg. (THNHM); same loc. and date, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

Echinopla cherapunjiensis* Bharti et Gul, 2012

Material examined. None.



Figs 74 – 91. 74-75, *Polyrhachis proxima*; 76-77, *Polyrhachis tibialis*; 78-79, *Cardiocondyla wroughtonii*; 80-83, *Carebara affinis*; 84-85, *Carebara castanea*; 86-89, *Carebara diversa*; 90-91, *Carebara pygmaea*.

Distribution in Laos. Luang Nam Tha (Zettel & Laciny 2015: 113).

Oecophylla smaragdina* (Fabricius, 1775) (Figs 54-55)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12-13.VI.2010, Sk. Yamane leg. (SKYC, THNHM); Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg. (SKYC, THNHM); Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg. (THNHM); same loc., 9.VI.2010, Sk. Yamane leg. (SKYC); Ang Nam Ngum, 24.VIII.2003, Y. Ochiai leg. (THNHM). **Oudomxay:** Namo, Mai Naatan, 21-26.VIII.2004, Y. Ochiai leg. (SKYC, THNHM). **Lak Sao:** 600-700 m alt., 22.III.1998, H. Fukuda leg. (SKYC, THNHM). **Phong Sali:** Khoa, Huei Pee (1000 m alt.), Y. Ochiai leg. (SKYC); Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC). **Luang Prabang:** Santi Resort, 17.XII.2015, W. Jaitrong leg. (THNHM); Luang Prabang City, 290 m alt., 03.I.2016, Y. Ochiai leg.

Distribution in Laos. Vientiane (Boulidam 2010; Itterbeeck *et al.* 2014), Bolikhamxay, Oudomxay, Luang Prabang (<https://www.flickr.com/photos/onefatmonkey/6542531847>), Khammouan (<https://www.flickr.com/photos/micche/6993419826>), Savannakhet (Yhoung-Aree & Viwatpanich 2005), Champasak (<https://www.flickr.com/photos/101244975>) and Bokeo (<https://www.flickr.com/photos/bartholomae/4060120523>).

***Paratrechina longicornis* (Latreille, 1802)** (Figs 56-57)

Material examined. Vientiane: Hadsaiphong, Naxaythong Dist., Thana sub-dist. 6.V.2010, W. Jaitrong leg. (SKYC); Sivilay Village, 9.V.2010, W. Jaitrong leg. (THNHM) same loc. and date, Sk. Yamane (SKYC); Somnuek Guesthouse, 3.VII.2012, D. Pick leg., #347 (MCZC). **Phong Sali:** Phongsali Hotel, 15.VIII.2012, D. Pick leg., #348 (MCZC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg. (THNHM). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane, Phong Sali and Luang Prabang (new record).

***Polyrhachis abdominalis* F. Smith, 1858** (Figs 58-59)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg. (THNHM); same loc. and date, Sk. Yamane leg. (SKYC). **Luang Prabang:** Kuangsi Waterfall Park, 16.XII.2015, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane and Luang Prabang (new record).

***Polyrhachis armata* (Le Guillou, 1842)** (Figs 60-61)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12-13.VI.2010, W. Jaitrong leg. (THNHM, SKYC); same loc. 12-14.VI.2010, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-233 (THNHM).

Distribution in Laos. Vientiane (new record).

Polyrhachis bellicosa* F. Smith, 1859

Material examined. None.

Distribution in Laos. Bolikhamxay [Ban Van Heue 20km E of Phou-kowkuei] (Hung, 1970).

Remarks. According to Kohout (2014) the populations of continental Asia belong to *P. olybria* Forel, 1912, not to *P. bellicosa*. We have never seen *P. bellicosa* specimens from the Indo-Chinese Peninsula. Although Kohout did not refer to the above-mentioned record from Laos cited by Hung (1970), this record was most probably based on misidentification.

Polyrhachis bicolor* F. Smith, 1858

Material examined. None.

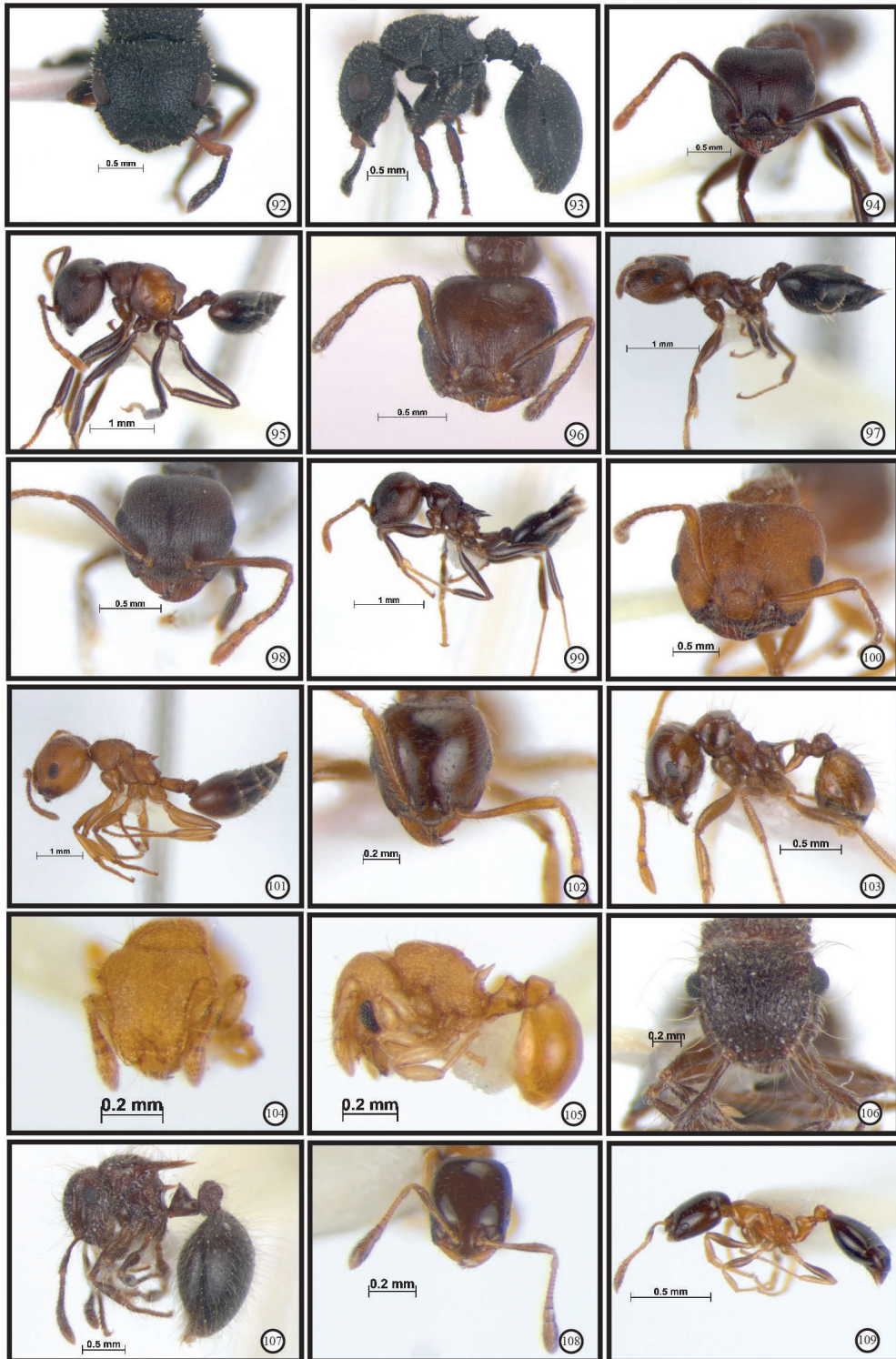
Distribution in Laos. No further record (Ran & Zhou 2013).

Polyrhachis bihamata* (Drury, 1773)

Material examined. Oudomxay: Namo Dist., Mai Naatan (950 m alt.), 22-23.VIII.2004, Y. Ochiai leg. (SKYC).

Distribution in Laos. Luang Prabang, Muang Sai (Santschi 1920b: 174); Muang Pek (Hung 1970: 16; Kohout 2014: 10) and Oudomxay (new record).

***Polyrhachis cryptoceroides* Emery, 1887a** (Figs 62-63)



Figs 92 – 109. 92-93, *Cataulacus granulatus*; 94-95, *Crematogaster aurita*; 96-97, *Crematogaster ferrarii*; 98-99, *Crematogaster modiglianii*; 100-101, *Crematogaster rogenhoferi*; 102-103, *Lophomyrmex lucidus*; 104-105, *Mayriella transfuga*; 106-107, *Meranoplus bicolor*; 108-109, *Monomorium floricola*.

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, Sk. Yamane leg., LA10-SKY-127 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Polyrhachis dives* F. Smith, 1857 (Figs 64-65)

Material examined. Bolikhamxay: Lak Sao, 5.IV.1998, 600-700 m alt., H. Fukuda leg. (SKYC, THNHM).

Distribution in Laos. This species was recorded from Laos without further information (Ran & Zhou 2013; Wang *et al.* 2012; Li 2006). In the present paper we record this species for the first time from Bolikhamxay.

Polyrhachis emmae* Santschi, 1920b

Material examined. None.

Distribution in Laos. Luang Prabang (Santschi 1920b: 175).

***Polyrhachis flavicornis* F. Smith, 1857** (Figs 66-67)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-145 (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-80 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., carton nest on leaf, LA10-SKY-071, -077, -086 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Polyrhachis halidayi* Emery, 1889

Material examined. None.

Distribution in Laos. Vientiane (Yoshitomi *et al.*, 2014), Luang Prabang, Tong-La (Santschi 1920b: 174) and Xieng Khouang (Yoshitomi *et al.* 2014).

Polyrhachis hemiopticoides* Mukerjee, 1930

Material examined. None.

Distribution in Laos. Bolikhamxay (Kohout 2013: 150; locality name is misspelled as Borikhane).

Polyrhachis illaudata* Walker, 1859 (Figs 68-69)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record), Ban Khoumphan and Ban Vangheua [Pakse?] (Mezger & Moreau 2015).

Polyrhachis laevis* F. Smith, 1858 (Figs 70-71)

Material examined. Phong Sali: Huei Pee, 1000 m alt., 18.VIII.2004, Y. Ochiai leg. (THNHM, SKYC).

Distribution in Laos. Phong Sali (new record).

***Polyrhachis phalerata* Menozzi, 1926** (Figs 72-73)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-156 (THNHM, SKYC); same loc. and date, Sk. Yamane, carton nest, LA10-SKY-132 (SKYC).

Distribution in Laos. Vientiane (new record). Remarks. *Polyrhachis mucronata* F. Smith, 1859 recorded from Bolaven Plateau and Ban Vangheus by Mezger and Moreau (2015) may be this species or *P. moesta* Emery, 1887. *P. mucronata* is a species ranging from northern Australia through New Guinea to eastern Indonesia (Kohout 2010).

***Polyrhachis proxima* Roger, 1863** (Figs 74-75)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg., attacked by *Aenictus* (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, Sk. Yamane leg. (SKYC); same loc., 11.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record).

***Polyrhachis rufipes* F. Smith, 1858**

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

***Polyrhachis tibialis* F. Smith, 1858-complex** (Figs 76-77)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg. (THNHM); same loc., 14.VI.2010, Sk. Yamane (SKYC).

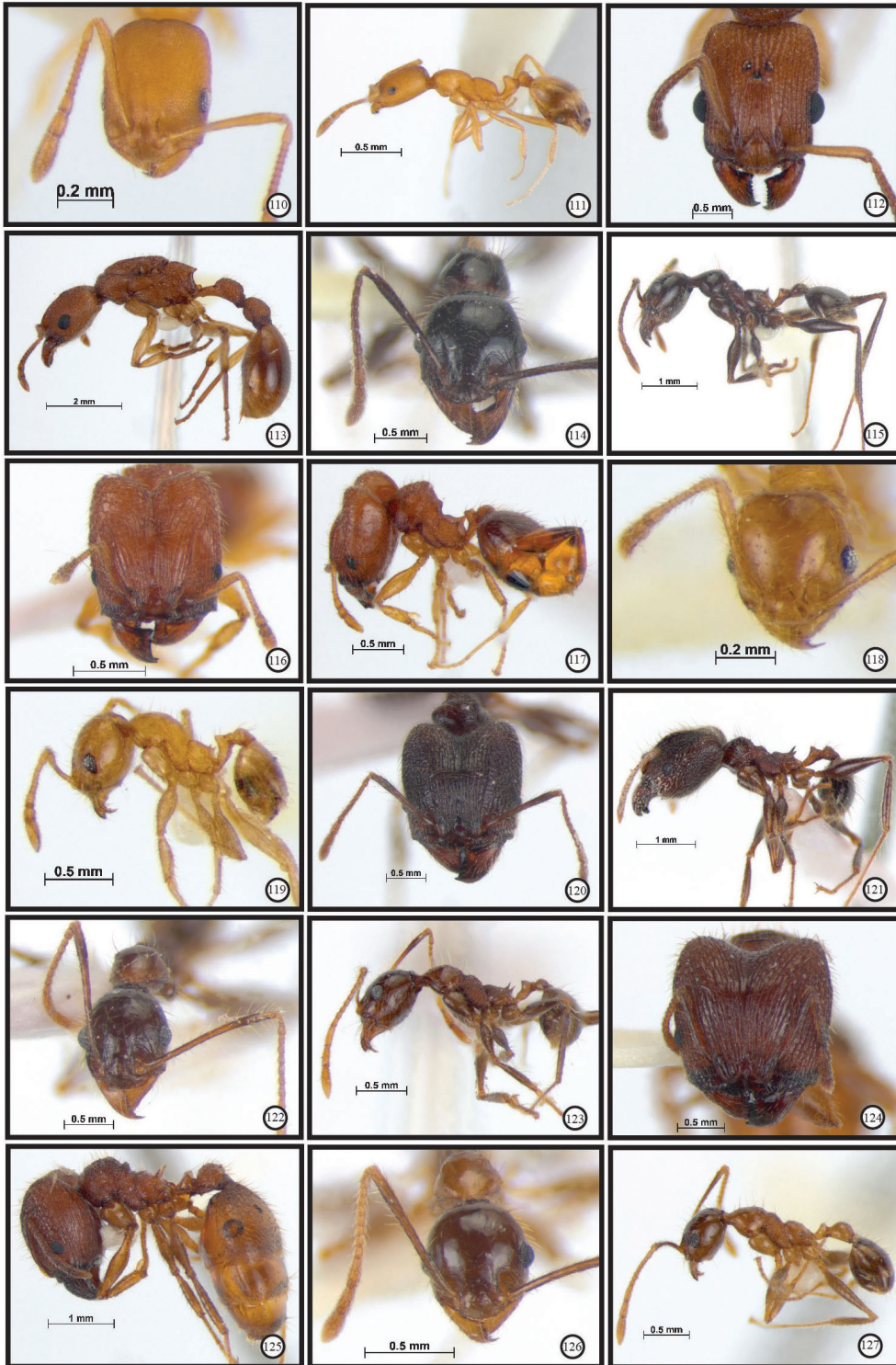
Distribution in Laos. Vientiane (new record).

Polyrhachis vitalisi* Santschi, 1920a

Material examined. None.

Distribution in Laos. Muong Pek (Santschi 1920a: 567; 1920b: 175).

MYRMICINAE [17 genera, 37 species, 2 sub-species]



Figs 110 – 127. 110-111, *Monomorium pharaonis*; 112-113, *Paratopula macta*; 114-115, *Pheidole dugasi*; 116-119, *Pheidole hongkongensis*; 120-123, *Pheidole plagiaria*; 124-127, *Pheidole tumida*.

***Cardiocondyla wroughtonii* (Forel, 1890)** (Figs 78-79)

Material examined. **Vientiane:** Naxaythong Dist., Sivilay Village, 11.VI.2010, Sk. Yamane leg., LA10-SKY-070 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

***Carebara affinis* (Jerdon, 1851)** (Figs 80-83)

Material examined. **Vientiane:** Pak Ngum Dist., Phang Dang Village, 13.VI.2010, Sk. Yamane leg. (SKYC); same loc., 14.VI.2010, W. Jaitrong leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg., LA10-SKY-010 (SKYC); same loc., 11.VI.2010, W. Jaitrong leg., WJT10-LAO-91 (THNHM).

Distribution in Laos. Vientiane (new record).

***Carebara castanea* F. Smith, 1858** (Figs 84-85)

Material examined. **Vientiane:** Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT-LAO-078 (THNHM); same loc., 11.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

Carebara castanea augustata* Santschi, 1920b

Material examined. None.

Distribution in Laos. Thatom (Santschi 1920b: 162).

***Carebara diversa* (Jerdon, 1851)** (Figs 86-89)

Material examined. **Vientiane:** Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (SKYC, THNHM); same loc. and date, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg., LA10-SKY-020 (SKYC, THNHM); Hadsaiphong Dist., Dondu Village, 6.V.2010, W. Jaitrong leg., WJT10-LAO-239 (SKYC, THNHM). **Luang Prabang:** Kuangsi Waterfall Park, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-008 (THNHM); Luang Prabang City, 290 m alt., 02.I.2016, Y. Ochiai leg., LA15/16-YO-02 (SKYC).

Distribution in Laos. Vientiane and Luang Prabang (new record).

Carebara diversa laotina* (Santschi, 1920b)

Material examined. None.

Distribution in Laos. Pakvet, Luang Prabang, Thatom (Santschi 1920b: 162).

Carebara petulens* (Santschi, 1920b)

Material examined. None.

Distribution in Laos. Muong Pek (Santschi 1920b: 164, as *Pheidologeton petulens* nov. sp.).

***Carebara pygmaea* (Emery, 1887b)-complex** (Figs 90-91)

Material examined. **Vientiane:** Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT-LAO-059 (SKYC, THNHM); same loc. and date, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

***Cataulacus granulatus* (Latreille, 1802)** (Figs 92-93)

Material examined. **Vientiane:** Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT-LAO-079 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., nest in bamboo stem, LA10-SKY-029 (SKYC); same loc., 11.VI.2010, Sk. Yamane (SKYC); Houi Nyang near Tha Ngon, 26.VIII.2003, Y. Ochiai leg. (SKYC).

Distribution in Laos. Vientiane (new record).

Crematogaster aurita* Karavaiev, 1935 (Figs 94-95)

Material examined. **Vientiane:** Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg., LA10-SKY-99 (SKYC, THNHM); Saythany Dist., Dongdok Village, 6.V.2010, W. Jaitrong leg., WJT10-ALO-203 (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg., LA10-SKY-015 (SKYC); same loc., 10.VI.2010, Sk. Yamane leg., LA10-SKY-032, -041 (SKYC, THNHM); Ang Nam Ngum, 24.VIII.2003, Y. Ochiai leg. (SKYC).

Distribution in Laos. Vientiane (Hosoishi & Ogata 2009a, b).

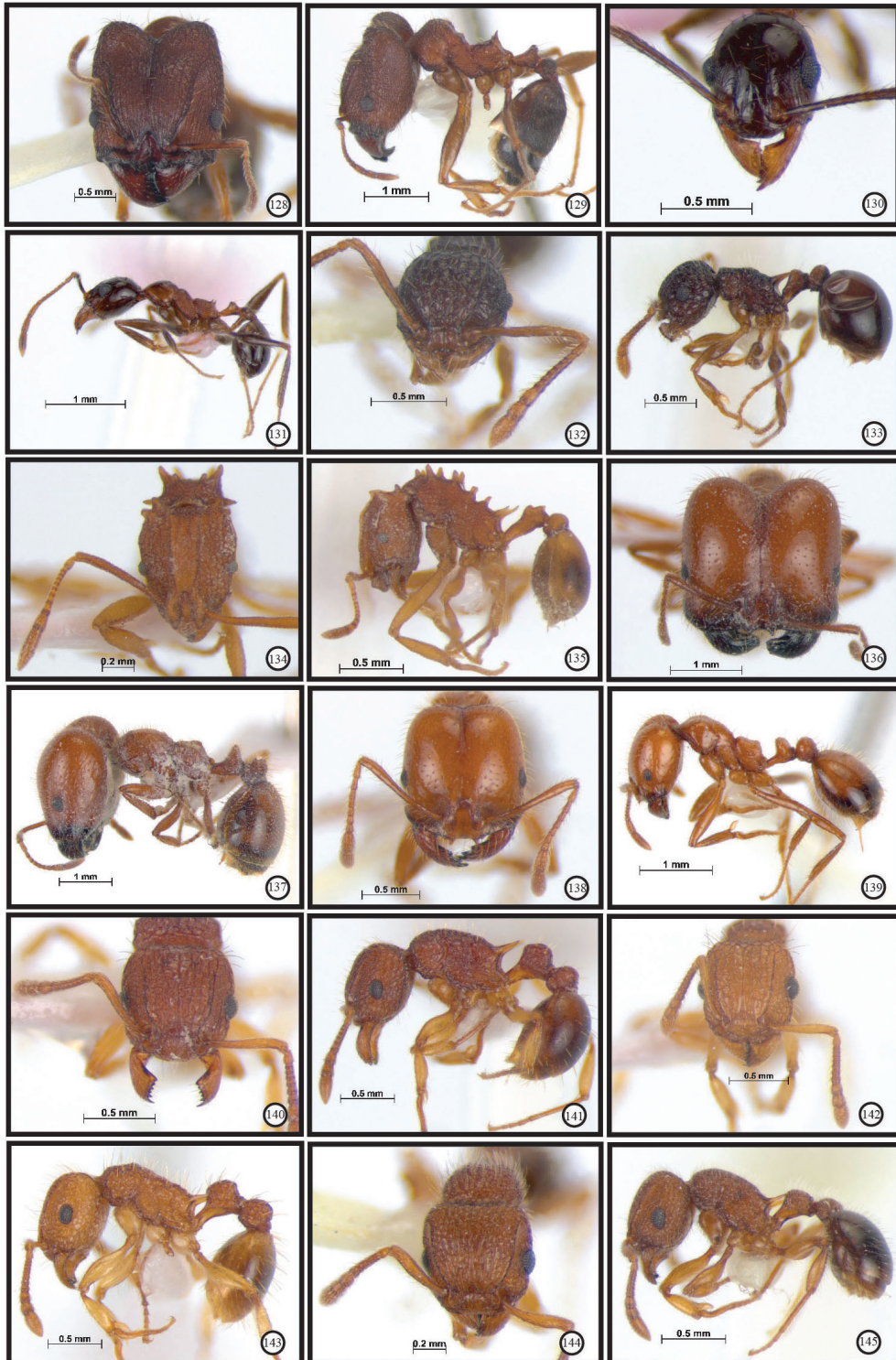
Crematogaster bouvardi* Santschi, 1920

Material examined. None.

Distribution in Laos. Xiang Mouang (Santschi 1920b: 161; described as var. *salvazai* of *C. walshi* st. *bouvardi*).

***Crematogaster ferrarii* Emery, 1888** (Figs 96-97)

Material examined. **Vientiane:** Naxaythong Dist., Sivilay Village, 10.VI.2010, 10.VI.2010, Sk. Yamane leg., LA10-



Figs 128 – 145. 128-131, *Pheidole yeensis*; 132-133, *Pristomyrmex punctatus*; 134-135, *Proatta butтели*; 136-139, *Solenopsis geminata*; 140-141, *Tetramorium flavipes*; 142-143, *Tetramorium insolens*; 144-145, *Tetramorium lanuginosum*.

SKY-047, -048, -054 (SKYC); same loc. and date, W. Jaitrong leg., WJT10-LAO-051, -076 (SKYC); Hadsaiphong Dist., Dondu Village, 8.V.2010, W. Jaitrong leg., WJT10-LAO-237 (SKYC); Ang Nam Ngun, 24.VIII.2003, Y. Ochiai leg. (SKYC). Phong Sali: Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (SKYC).

Distribution in Laos. Phong Sali and Vientiane (new record).

Crematogaster modiglianii* Emery, 1900 (Figs 98-99)

Material examined. Vientiane: Pak Ngum Dist., Phag Dang Village, 13.VI.2010, W. Jaitrong leg., WJT10-LAO-136 (THNHM); same loc., 12.VI.2010, Sk. Yamane leg., LA10-SKY-089 (THNHM, SKYC).

Distribution in Laos. Vang Vieng (Hosoishi *et al.* 2010) and Vientiane (new record).

Crematogaster quadriruga* Forel, 1911a

Material examined. Vientiane: Pak Ngum Dist., Phag Dang Village, 13.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (Hosoishi & Ogata 2016).

Crematogaster rogenhoferi* Mayr, 1879-complex (Figs 100-101)

Material examined. Vientiane: Pak Ngum Dist., Phag Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-100 (SKYC, THNHM); same loc. and date, Sk. Yamane leg., LA10-SKY-103 (SKYC); same loc. and date, Sk. Yamane leg., night walk (SKYC); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg. (THNHM); same loc. and date, Sk. Yamane leg., night walk, LA10-SKY-051 (SKYC). Bolikhamxay: Lak Sao, 600-700 m alt., 2.IV.1998, H. Fukuda leg. (SKYC). **Luang Prabang:** Santi Resort, 16.XII.2015, W. Jaitrong leg., LAO15-WJT-002 (THNHM).

Distribution in Laos. Vientiane, Luang Prabang (new record) and Xieng Khouang (Yoshitomi *et al.* 2014).

***Crematogaster treubi* Emery, 1896**

Material examined. Vientiane: Pak Ngum Dist., Phag Dang Village, 12.VI.2010, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg., LA10-SKY-002, -009, -053 (SKYC); same loc. 10.VI.2010, W. Jaitrong leg., WJT10-

LAO-59 (SKYC); Hadsaiphong dist., Dondu Village, 8.V.2010, WJT10-LAO-238 (SKYC).

Distribution in Laos. Vientiane (new record).

Liomyrmex gestroi* (Emery, 1887b)

Material examined. None.

Distribution in Laos. Muong Pek (Santschi, 1920b: 160, as *Liomyrmex aurianus*, synonym of *L. gestroi*).

***Lophomyrmex lucidus* Menozzi, 1930** (Figs 102-103)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg. (THNHM, SKYC); same loc., 10.VI.2010, W. Jaitrong leg., WJT10-LAO-121 (THNHM); same loc., 11.VI.2010, Sk. Yamane, LA10-SKY-081 (SKYC).

Distribution in Laos. Vientiane (new record).

***Mayriella transfuga* Baroni Urbani, 1977** (Figs 104-105)

Pak Ngum Dist., Phag Dang Village, 13.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

Meranoplus bicolor* Guérin-Ménéville, 1844 (Figs 106-107)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg. (SKYC); same loc. and date, Sk. Yamane leg. (SKYC); same loc., 10.VI.2010, Sk. Yamane leg., LA10-SKY-038 (THNHM, SKYC). Oudomxay: Namo Dist., Mai Naatan, 26.VIII.2004, Y. Ochiai leg. (SKYC).

Distribution in Laos. Sedone, Pakse (Schödl 1999: 64); Oudomxay and Vientiane (new record).

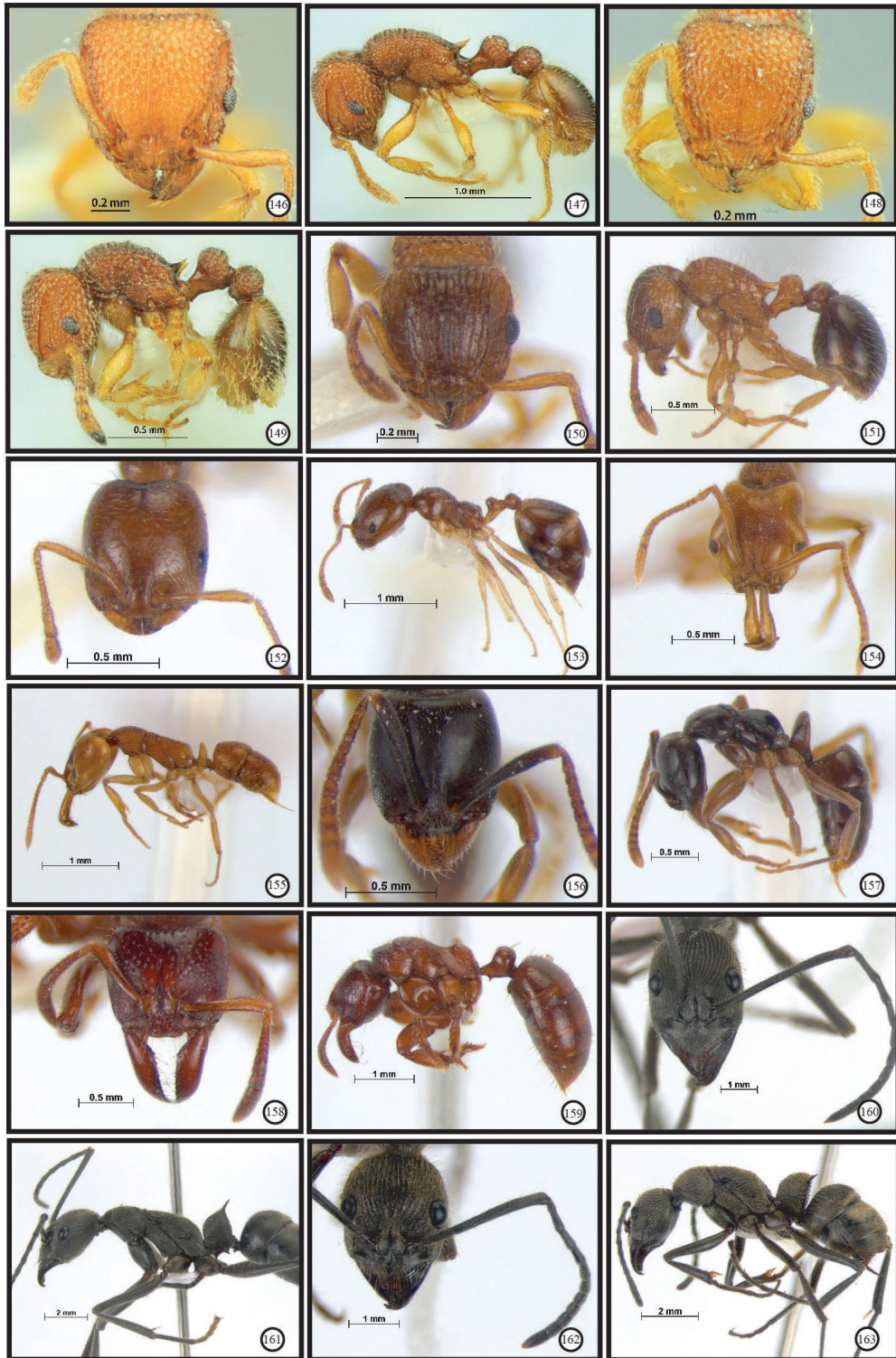
Meranoplus laeiventris* Emery, 1889

Material examined. None.

Distribution in Laos. 25 km SE Muang Sing (Schödl, 1998: 380).

***Monomorium floricola* (Jerdon, 1851)** (Figs 108-109)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-255 (THNHM, SKYC); Hadsaiphong Dist., Thana Village, 7.V.2010, W. Jaitrong leg. (THNHM, SKYC); Saytharry dist., Dongdock Village, 6.V.2010, W. Jaitrong leg. (SKYC).



Figs 146 – 163. 146-149, *Tetramorium polymorphum*; 150-151, *Tetramorium smithi*; 152-153, *Trichomyrmex destructor*; 154-155, *Anochetus graeffei*; 156-157, *Brachyponera chinensis*; 158-159, *Centromyrmex feae*; 160-161, *Diacamma longitundine*; 162-163, *Diacamma rugosum*.

Distribution in Laos. Vientiane (new record) and no locality (Rapusas *et al.* 2006).

***Monomorium pharaonis* (Linnaeus, 1758)** (Figs 110-111)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg. (THNHM); Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg., WJT10-LAO-210 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

***Paratopula macta* Bolton, 1988** (Figs 112-113)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

***Pheidole dugasi* Forel, 1911b** (Figs 114-115)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg. (THNHM).

Distribution in Laos. Vientiane (new record).

***Pheidole hongkongensis* Wheeler, 1928** (Figs 116-119)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VII.2010, Sk. Yamane, LA10-SKY-046 (SKYC); same loc., 11.VI.2010, W. Jaitrong leg., WJT10-LAO-125 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Pheidole plagiaria* F. Smith, 1860b (Figs 120-123)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-116 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record) and Xieng Khouang (Yoshitomi *et al.* 2014).

***Pheidole tumida* Eguchi, 2008** (Figs 124-127)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-147 (THNHM); same loc., 14.VI.2010, Sk. Yamane leg., LA10-SKY-120 (SKYC, THNHM); Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-82 (THNHM); same loc., 11.VI.2010, W. Jaitrong leg., WJT10-LAO-98 (THNHM).

Distribution in Laos. Vientiane (new record).

***Pheidole yeensis* Forel, 1902** (Figs 128-131)

Material examined. Vientiane: Naxaythong

Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-234 (THNHM). **Luang Prabang:** Santi Resort, 17.XII.2015, W. Jaitrong leg., LAO15-WJT-007 (THNHM).

Distribution in Laos. Vientiane and Luang Prabang (new record).

Pristomyrmex punctatus* (F. Smith, 1860b) (Figs 132-133)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-226 (SKYC, THNHM); same loc., 9.VI.2010, W. Jaitrong leg., WJT10-LAO-30 (SKYC, THNHM); same loc., 11.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Muong Pek (Santschi 1920b: 160, as *Pristomyrmex japonicus* Forel, 1900 junior synonym of *P. punctatus*); Vientiane (new record).

***Proatta butteli* Forel, 1912** (Figs 134-135)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg. (THNHM); Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-70 (THNHM); same loc., 10.VI.2010, Sk. Yamane leg., LA10-SKY-042 (THNHM, SKYC); same loc., 11.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

***Recurvidris recurvispinosa* (Forel, 1890)**

Material examined. Pak Ngum Dist., Phang Dang Village, 13.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

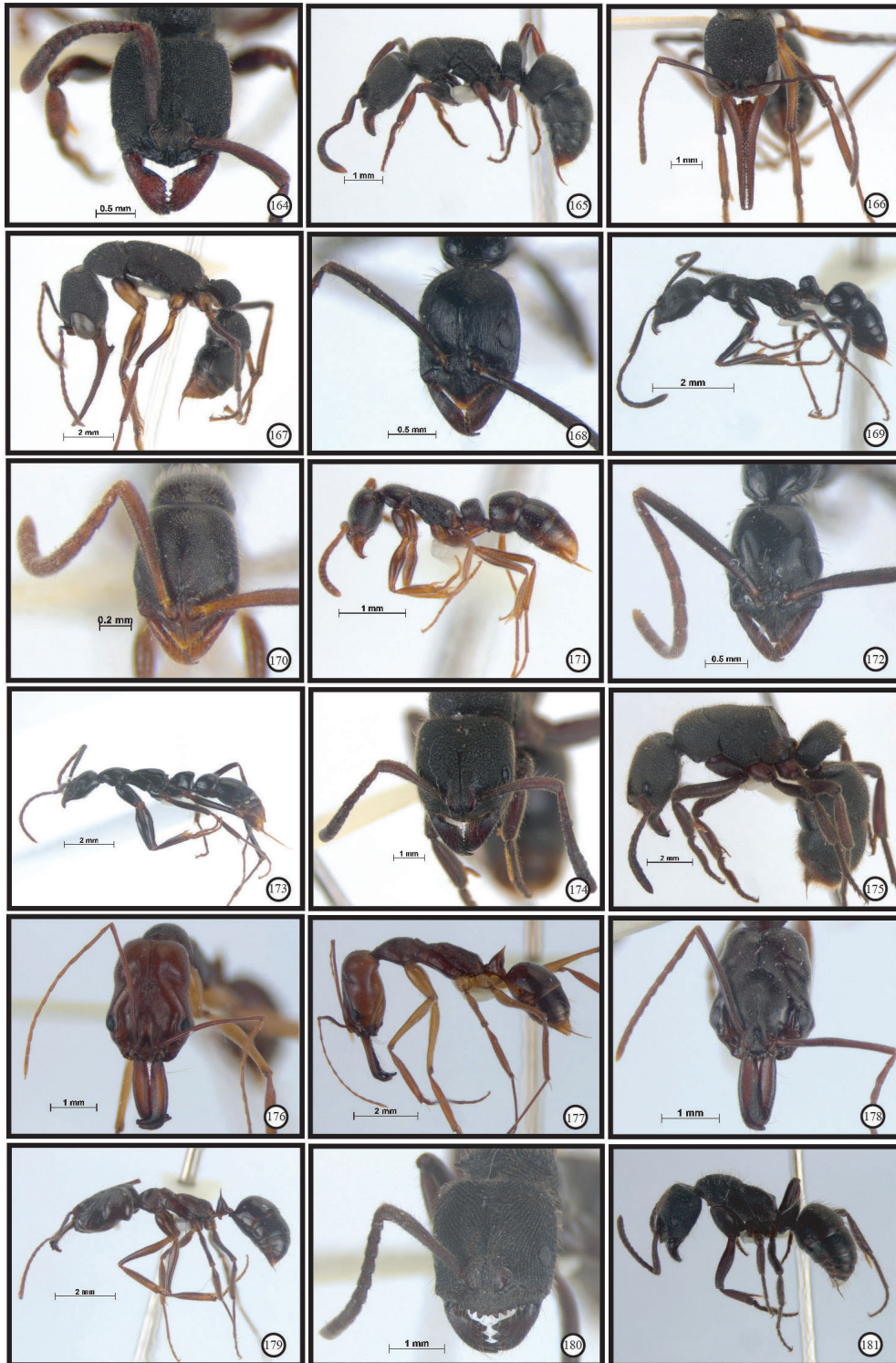
Solenopsis geminata* (Fabricius, 1804) (Figs 136-139)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg. (SKYC); same loc., 14.VI.2010, W. Jaitrong leg. (THNHM); Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-33 (THNHM, SKYC); Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg. (THNHM); Sornuek Guesthouse, 3.VII.2012, D. Pick leg., #347 (MCZC).

Distribution in Laos. Luang Prabang (Santschi, 1920b: 161); Vientiane (new record).

***Tetramorium flavipes* Emery, 1893** (Figs 140-141)

Material examined. Vientiane: Pak Ngum



Figs 164 – 181. 164-165, *Ectomomyrmex leeuwenhoekii*; 166-167, *Harpegnathos venator*; 168-169, *Leptogenys diminuta*; 170-171, *Leptogenys hysterica*; 172-173, *Leptogenys kraepelini*; 174-175, *Pseudoneoponera rufipes*; 176-177, *Odontomachus rixosus*; 178-179, *Odontomachus simillimus*; 180-181, *Odontoponera denticulata*.

Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg. (SKYC); same loc. and date, W. Jaitrong leg. (SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-043 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., ex termite mound, LA10-SKY-022, -24 (SKYC); same loc., 10.VI.2010, W. Jaitrong leg., WJT10-LAO-064 (THNHM); same loc. and date, Sk. Yamane leg., nest under log, LA10-SKY-055); same loc., 12.VI.2010, Sk. Yamane leg., rotting wood, LA10-SKY-093, -102 (SKYC).

Distribution in Laos. Vientiane (new record).

***Tetramorium insolens* (F. Smith, 1861)** (Figs 142-143)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT-LAO-31, -039 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., ex termite mound, LA10-SKY-014, -026 (SKYC); same loc., 10.VI.2010, W. Jaitrong leg., WJT10-LAO-062 (THNHM).

Distribution in Laos. Vientiane (new record).

***Tetramorium lanuginosum* Mayr, 1870** (Figs 144-145)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-045 (THNHM); same loc. and date, Sk. Yamane leg. (SKYC).
Phong Sali: Phongsali Hotel, 15.VIII.2012, D. Pick leg., #348 (MCZC).

Distribution in Laos. Vientiane and Phong Sali (new record).

Tetramorium polymorphum* Yamane et Jaitrong, 2011 (Figs 146-149)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, W. Jaitrong leg., WJT10-LAO-114 (THNHM, SKYC, type series); same colony, Sk. Yamane leg. LA10-SKY-100 (THNHM, SKYC, type series).

Distribution in Laos. Vientiane (Yamane & Jaitrong 2011: 68).

***Tetramorium smithi* Mayr, 1879** (Figs 150-151)

Material examined. Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record).

***Trichomyrmex destructor* (Jerdon, 1851)** (Figs 152-153)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-120 (THNHM, SKYC); same loc., 10.VI.2010, Sk. Yamane leg., LA10-SKY-059, -133 (THNHM, SKYC).
Phong Sali: Phongsali Hotel, 15.VIII.2012, D. Pick leg., #348 (MCZC).
Bolikhamsay: Lak Sao, 600-700 m alt., 2.IV.1998, H. Fukuda leg. (THNHM, SKYC).

Distribution in Laos. Bolikhamsay, Vientiane and Phong Sali (new record).

PONERINAE [11 genera, 20 species]

***Anochetus graeffei* Mayr, 1870** (Figs 154-155)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg. (THNHM); same loc., 11.VI.2010, Sk. Yamane leg., ex soil, LA10-SKY-036 (SKYC); same loc., 5.V.2010, W. Jaitrong leg., WJT10-LAO30 (SKYC); Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg., LA10-SKY-094 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

***Brachyponera chinensis* (Emery, 1895)-complex** (Figs 156-157)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, W. Jaitrong leg., WJT10-LAO-128 (THNHM); Naxaythong Dist., Sivilay Village, 11.VI.2010, Sk. Yamane leg., LA10-SKY-075 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Brachyponera luteipes* Mayr, 1862

Material examined. None.

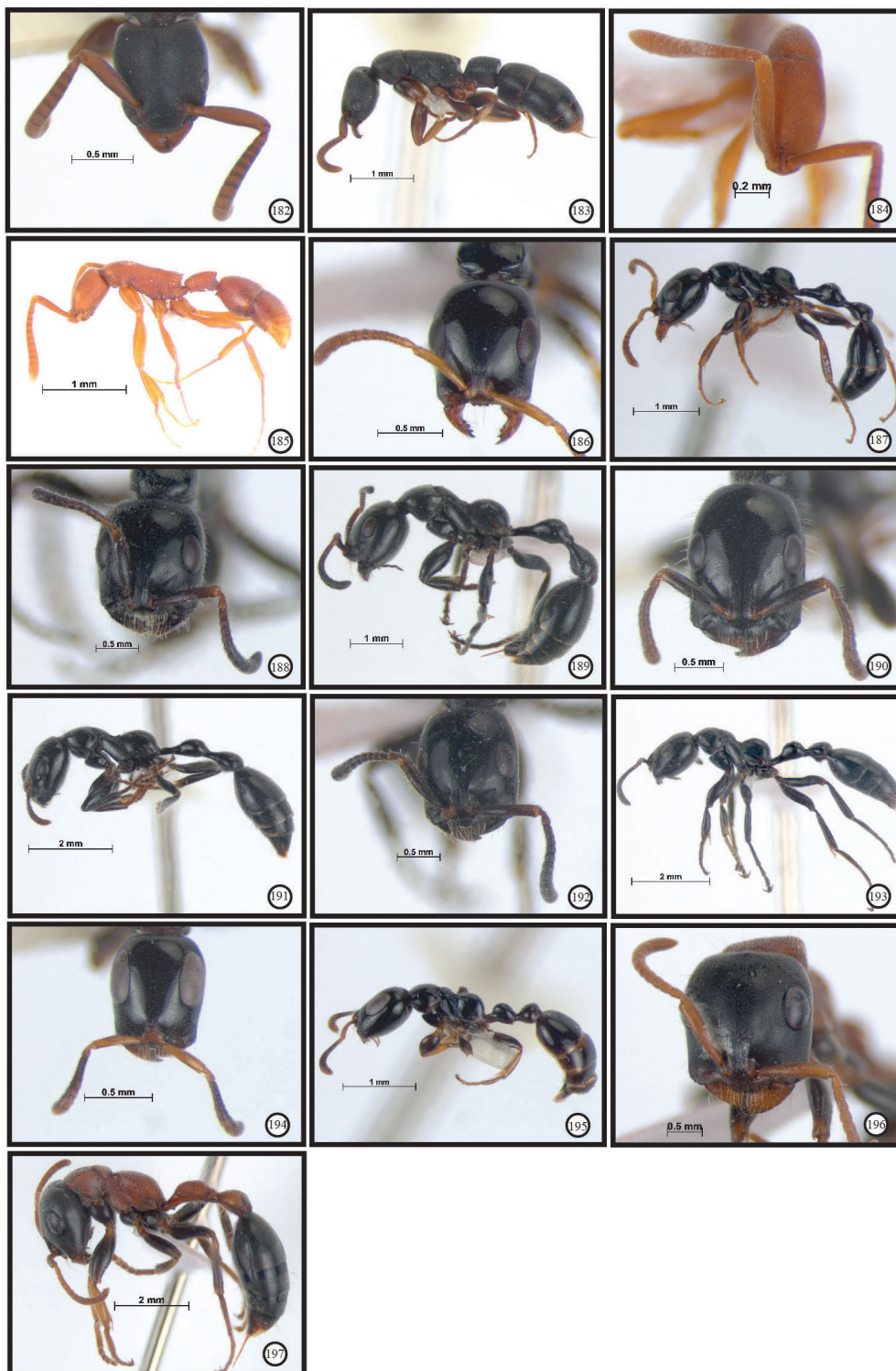
Distribution in Laos. Tuong La (Santschi 1920b: 159, cited as *Euponera* (*Brachyponera*) *luteipes*).

***Centromyrmex feae* (Emery, 1889)** (Figs 158-159)

Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-63 (THNHM); same loc. and date, Sk. Yamane leg. (SKYC); same loc., 7.V.2010, WJT10-LAO-251 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Diacamma ceylonense orbiculata* Santschi, 1932



Figs 182 – 197. 182-183, *Platythyrea parallela*; 184-185, *Probolomyrmex longiscapus*; 186-187, *Tetraponera al-laborans*; 188-189, *Tetraponera attenuata*; 190-191, *Tetraponera bingami*; 192-193, *Tetraponera nigra*; 194-195, *Tetraponera nitida*; 196-197, *Tetraponera rufonigra*.

Material examined. None.

Distribution in Laos. Luang Prabang (Santschi 1932: 14).

Diacamma holzschuhi* Laciny, Pal et Zettel, 2015

Material examined. None.

Distribution in Laos. Hua Phan (Laciny *et al.* 2015: 115).

Diacamma longitudinale* Emery, 1889 (Figs 160-161)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, W. Jaitrong leg., WJT10-LAO-66 (THNHM).

Distribution in Laos. Luang Prabang (Santschi 1920b: 158); Vientiane (new record).

***Diacamma rugosum* (Le Guillou, 1842)** (Figs 162-163)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-153 (THNHM); same loc. and date, Sk. Yamane leg., nest under log, LA10-SKY-123 (SKYC).

Distribution in Laos. Vientiane (new record).

Ectomomyrmex leeuwenhoekii* (Forel, 1886) (Figs 164-165)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VII.2010, Sk. Yamane leg., surface soil, LA10-SKY-088 (SKYC); same loc., 14.VI.2010, W. Jaitrong leg., WJT10-LAO-155 (THNHM, SKYC). Phong Sali, Khoua, Hoi Pee (1000 m alt.), 19.VIII.2004, Y. Ochiai leg. (SKYC).

Distribution in Laos. Phong Sali and Vientiane (Jaitrong *et al.* 2011: 319, cited as *Pachycondyla leeuwenhoekii*, prey of *Aenictus cf. dentatus*).

***Harpegnathos venator* F. Smith, 1858** (Figs 166-167)

Material examined. Phong Sali: Khoa, Hoi Pee, 1000 m alt., 19.VIII.2004, Y. Ochiai leg. (THNHM).

Distribution in Laos. Phong Sali (new record).

***Leptogenys diminuta* (F. Smith, 1857)-complex** (Figs 168-169)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (THNHM); same loc. and date, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

***Leptogenys hysterica* Forel, 1900b** (Figs 170-171)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-149 (THNHM, SKYC); same loc. and date, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-223 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Leptogenys khammouanensis* Roncin et Deharveng, 2003

Material examined. None.

Distribution in Laos. Khammouan (Roncin & Deharveng 2003: 920).

Remarks. This is a unique species specialized in caves.

***Leptogenys kraepelini* Forel, 1905** (Figs 172-173)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 13.VI.2010, rotting wood, Sk. Yamane leg., LA10-SKY-110 (SKYC); same loc. 14.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record).

Odontomachus monticola* Emery, 1892

Material examined. Oudomxay: Namo Dist., Mai Naatan, 950 m alt., 21-26.VIII.2004, Y. Ochiai leg. (THNHM, SKYC).

Distribution in Laos. Muong Pek (Santschi 1920b: 159) and Oudomxay (new record).

***Odontomachus rixosus* F. Smith, 1857** (Figs 176-177)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg., LA10-SKY-098 (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-38 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

***Odontomachus simillimus* F. Smith, 1858** (Figs 178-179)

Material examined. Vientiane: Had-saiphong Dist., Thana Village, 6.V.2010, W. Jaitrong leg., WJT10-LAO-205 (THNHM, SKYC).

Distribution in Laos. Vientiane (new record).

Odontoponera denticulata* (F. Smith, 1858) (Figs 180-181)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010,

W. Jaitrong leg. (THNHM); same loc. and date, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 9.VI.2010, Sk. Yamane leg. (SKYC); some loc., 10.VI.2010, W. Jaitrong leg. (THNHM); Houi Nyang near Tha Ngon, 26.VIII.2003, Y. Ochiai leg. (SKYC). **Oudomxay:** Namo Dist., Mai Naatan, 26.VIII.2004, Y. Ochiai leg. (THNHM, SKYC). **Phong Sali:** Khoua, Huei Pee, 1000 m alt., 19.VIII.2004, Y. Ochiai leg., (THNHM, SKYC); Muang Khoua, 22-24.VIII.2005, Y. Ochiai leg. (THNHM, SKYC). **Luang Prabang:** Kuangsi Waterfall Park, 16.XII.2015, W. Jaitrong leg. (THNHM).

Remarks. Lao specimens (Lat-Hom and Luang Prabang) cited as *Odontoponera transversa* (F. Smith, 1857) in Santschi (1920b) should be reidentified as *O. denticulata* (sensu Yamane 2009).

Distribution in Laos. Vientiane, Oudomxay Phong Sali and Luang Prabang.

Platythyrea parallela (F. Smith, 1859) (Figs 182-183)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (THNHM, SKYC); Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg. (THNHM); same loc., 10.VI.2010, Sk. Yamane leg. (SKYC).

Distribution in Laos. Vientiane (new record).

Pseudoneoponera rufipes (Jerdon, 1851)* (Figs 174-175)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg., WJT10-LAO-144 (THNHM, SKYC); same loc. and date, Sk. Yamane leg. (SKYC); Naxaythong Dist., Sivilay Village, 11.VI.2010, Sk. Yamane leg. (SKYC). **Luang Prabang:** Santi Resort, 17.XII.2015, W. Jaitrong leg. (THNHM).

Distribution in Laos. Thatom (Santschi 1920b: 159, cited as *Pachycondyla (Bothroponera) rufipes*) and Luang Prabang (new record).

PROCERATIINAE [1 genus, 1 species]

Probolomyrmex longiscapus Xu et Zeng, 2000 (Figs 184-185)

Material examined. Vientiane: Naxay-

thong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-97 (THNHM); same loc. and date, Sk. Yamane leg., nest in soil, LA10-SKY-078 (SKYC).

Distribution in Laos. Vientiane (new record).

PSEUDOMYRMICINAE [1 genus, 6 species]

Tetraponera allaborans (Walker, 1859)* (Figs 186-187)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 9.VI.2010, W. Jaitrong leg., WJT10-LAO-32 (THNHM, SKYC); same loc. and date, Sk. Yamane leg. nest in dead twig, LA10-SKY-003 (SKYC); same loc., 10.VI.2010, W. Jaitrong leg. (THNHM); Hadsaiphong Dist., Thana Village, 6.V.2010, W. Jaitrong loc. (THNHM); Houi Nyang near Tha Ngon, 26.VIII.2003, Y. Ochiai (SKYC).

Distribution in Laos. Bolikhamxay (Ward 2001) and Vientiane (new record).

Tetraponera attenuata F. Smith, 1877* (Figs 188-189)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 12.VI.2010, Sk. Yamane leg. (SKYC); same loc., 13.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Bolikhamxay [Phou Khao Khouay N.P.] (Ward 2001) and Vientiane (new record).

Tetraponera binghami (Forel, 1902)* (Figs 190-191)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 7.V.2010, W. Jaitrong leg., WJT10-LAO-227 (THNHM, SKYC); Hadsaiphong Dist., Dondu Village, 8.V.2010, W. Jaitrong leg., WJT10-LAO-240 (THNHM, SKYC).

Distribution in Laos. Luang Prabang (Santschi 1920b: 160, as *Sima binghami*); Vientiane (new record).

Tetraponera nigra (Jerdon, 1851) (Figs 192-193)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 11.VI.2010, W. Jaitrong leg., WJT10-LAO-93 (THNHM, SKYC); same loc. and date, W. Jaitrong leg., WJT10-LAO-123 (THNHM, SKYC); same loc. and date, Sk. Yamane leg., LA10-SKY-085 (SKYC).

Distribution in Laos. Vientiane (new record).
Tetraponera nitida (F. Smith, 1860) (Figs 194-195)

Material examined. Vientiane: Pak Ngum Dist., Phang Dang Village, 14.VI.2010, W. Jaitrong leg. (THNHM).

Distribution in Laos. Vientiane (new record).
Tetraponera rufonigra (Jerdon, 1851)* (Figs 196-197)

Material examined. Vientiane: Naxaythong Dist., Sivilay Village, 10.VI.2010, Sk. Yamane leg. (SKYC); same loc., 11.VI.2010, W. Jaitrong leg., WJT10-LAO-94 (THNHM, SKYC). Oudomxay, Nam, Mai Naatan (950 m alt.), Y. Ochiai leg. (SKYC).

Distribution in Laos. Champasak (Ward 2001: 649); Oudomxay and Vientiane (new record).

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