

New Distributional Records of Spiders (Arachnida: Araneae) from the West Coast of Peninsular Malaysia

Dzulhelmi Muhammad Nasir,^{1*} Suriyanti Su,² Zulqarnain Mohamed¹ and Norma Che Yusoff¹

¹Institute of Biological Sciences, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia

²School of Environmental Natural Resource Sciences, Faculty of Science and Technology, National University of Malaysia, 43600 Bangi, Selangor, Malaysia

Abstract.- This study documented an additional of 219 spider species to the previous checklist of Peninsular Malaysia. Species recorded comprised of field specimens and lists obtained from available literatures. For field specimens, spiders were collected from 11 different locations in west coast of Peninsular Malaysia between January 2012 through December 2013. A total of 70 spider species from field collection were considered as new records while the other 149 spider species were compiled from available literatures. This documentation added up to a total of 644 spider species currently recorded in Peninsular Malaysia.

Keywords: New records, checklist, spiders, inventory, Peninsular Malaysia.

INTRODUCTION

Spider fauna are consistently being documented in Southeast Asia but the spider fauna for Peninsular Malaysia is poorly investigated. The first checklist for spiders of Peninsular Malaysia recorded 425 species from 42 families and 238 genera (Norma-Rashid and Li, 2009) which provided a general guideline for researchers to investigate the spider fauna of Peninsular Malaysia. Later, quite a number of new records and descriptions of new species from various spider groups have emerged. These data has contributed to spider species for peninsular Malaysia, though the information was scattered. Nonetheless, Song *et al.* (2002) has listed the diversity of spider fauna in other Southeast Asia. Recently, inventories on the spider fauna for Laos with newly described species have been increasing rapidly (Jager, 2007; Jager and Praxaysombath, 2009, 2011). Such positive inventories are needed to expand the knowledge on the spider fauna of Southeast Asia.

During our field survey to document the spider fauna on the west coast of peninsular Malaysia, we encountered many common spider species that were easily found and collected but may have been overlooked, therefore not recorded in the

previous checklist (*i.e.* Norma-Rashid and Li, 2009). This paper provides spider fauna records which were mainly focusing on the west coast of Peninsular Malaysia. The compilation of recorded spider species from available literatures that were not listed in the previous checklist was also included.

METHODS

Study area

Specimens examined were collected from 11 field expeditions conducted between January 2012 through December 2013 from following locations and habitats on the west coast of peninsular Malaysia (Fig. 1).

Specimen identification

Specimens were collected by hand and sweep-net during the day and night time. Specimens were stored in 75% ethanol. Male palps were observed under dissecting microscope and illustrated, while female genitalia were dissected, cleared in Potassium Hydroxide (KOH) and illustrated under microscope. Species identification was most notably done by using Barrion and Litsinger (1995), Song *et al.* (1999), Murphy and Murphy (2000), Deeleman-Reinhold (2001), Sebastian and Peter (2009), Koh and Ming (2013) and other relevant literatures. The checklist is presented in alphabetical order and synonym names can be referred in Platnick (2013). The materials

* Corresponding author: dzul_3my@yahoo.com

0030-9923/2014/0006-1573 \$ 8.00/0

Copyright 2014 Zoological Society of Pakistan

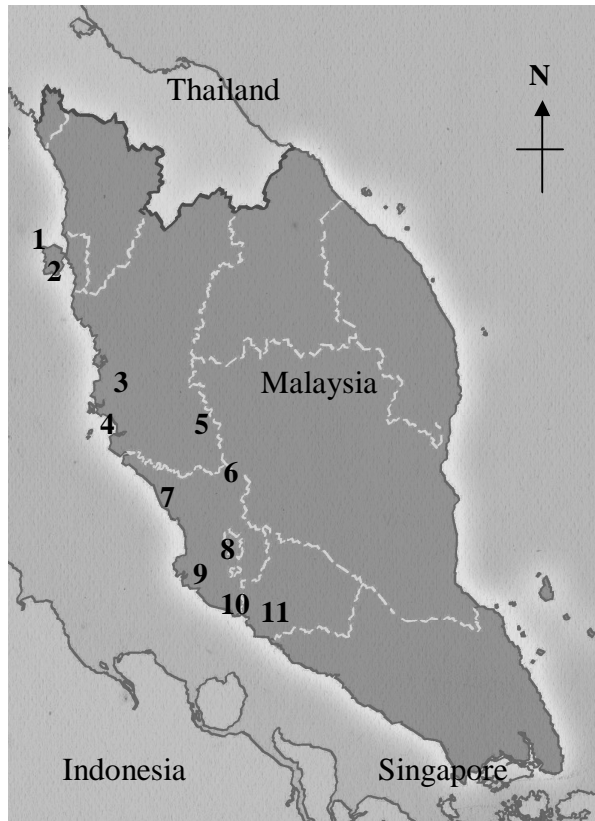


Fig. 1. Map of Peninsular Malaysia
 L1, Penang National Park, N 5°26'16" N; 100°17'27" E, lowland dipterocarp forest, 9-11 October 2012; L2, Penang Hill, or Bukit Bendera, 5°26'1" N; 100°15'60" E, Hill dipterocarp forest (800 m a.s.l.), 6-8 October 2012; L3, Lekir Agriculture Centre Perak, 4°8'10" N; 100°43'41" E, Agriculture farm, 12-14 February 2013; L4, Manjung Residential Area, 4°11'45" N; 100°39'53" E, human settlements, 23-25 February 2013, 10-12 December 2013; L5, Cameron Highlands, 4°30'42" N; 101°28'42" E, lower montane forest (1100 m a.s.l.), 25-27 January 2013; L6, Fraser Hill Nature Reserve, 3°43'7" N; 101°44'25" E, lower montane forest (900 m a.s.l.), 23-27 Sept 2012; L7, Taman Alam Kuala Selangor, 3°20'16" N; 101°14'56" E, mangrove forest, 18-21 March 2013; L8, Rimba Ilmu Botanical Garden University of Malaya, 3°7'29" N; 101°39'12" E, Botanical garden, 24-26 February 2012, 25-27 December 2012; L9, Ulu Gombak Biodiversity Centre University of Malaysia, 3°22'60.1" N; 101°47'20" E, primary and secondary forest, 13-15 November 2012, 14-17 March 2013; L10, Taman Paku Pakis UKM, N 2°55'47"; 101°46'44" E, Botanical garden, 16-18 June 2012, 10-12 September 2012 and L11, Kuala Pilah Rubber plantation, 2°26'56" N; 102°11'1" E, rubber plantation, 17-19 November 2012

examined are presented in the list in the following order: specimen examined (if any), microhabitat found, period, collector(s), date, and location. The reference sequence is as follows: page number of the literature cited, figure, and photos or illustrations. In addition, published literature for spiders recorded in Peninsular Malaysia that were not listed by Norma-Rashid and Li (2009) included in this paper are presented in a table in the following sequence: Family, species name, page number (or figures/plates) of the mentioned species, and references for guidelines (Table I).

RESULTS AND DISCUSSION

In the present study, a total of 70 spider species from 14 families, 58 genera were first time recorded from the west coast of Peninsular Malaysia (Table II). Additionally, 149 species from 33 families and 95 genera were compiled from available literatures. An estimated 66% increment for spider diversity recorded in this paper contributed to a much wider views for the spider diversity, and this should enhance others to explore and discover more of the spider fauna which still remain mysterious till today. The additional recorded species still does not reveal the accurate number of spider species occurred for this country since most of the newly recorded spider fauna from this study are likewise to be found in other Southeast Asian countries. Thus, it should be expected that many more species found in the neighboring countries might yet to be found in this country due to the same climate, topographies and habitat types. Therefore, it should also be expected that more spider species could be discovered for countries that have more tropical rainforests coverage with greater habitat variability and bigger land mass.

Documenting the spider fauna and providing the localities is very important especially when the species are specialize to certain microhabitats (Sial and Chaudhry, 2012) and very cryptic (*e.g. Cyphalonotus selangor*). Deeleman-Reinhold (2001) mentioned that nearly 80% of the spider species in this tropical region are still not described. The current constraint to determine the actual proportion of spider fauna for Malaysia is a very challenging

Table I.- List of spiders of Peninsular Malaysia from published literatures.

Families	Species	Page number, References
Araneidae	<i>Anepsion maritatum</i> (Cambridge 1877)	p52, Koh and Ming (2013)
	<i>Araneus anaspastus</i> (Thorell 1892)	Wan-Azizi (2008)
	<i>Araneus ancurus</i> Zhu, Tu & Hu 1988	Wan-Azizi (2008)
	<i>Araneus elongatus</i> Yin, Wang & Xie 1989	Wan-Azizi (2008)
	<i>Araneus mitificus</i> (Simon 1886)	p40, Noraina (1999)
	<i>Araneus neogeata</i> (Thorell 1896)	Pl.12.5, Murphy and Murphy (2000)
	<i>Argiope catenulata</i> (Doleschall 1859)	p570, Barrion & Litsinger (1995)
	<i>Argiope mangal</i> Koh 1991	Pl.13.2, Murphy and Murphy (2000)
	<i>Caerostris sumatrana</i> Strand 1915	Pl.14.15, Murphy and Murphy (2000)
	<i>Cyclosa centrodes</i> (Thorell 1857)	Wan-Azizi (2008)
	<i>Cyphalonotus selangor</i> Dzulhelmi 2014	p5, Dzulhelmi et al. (2014)
	<i>Cyphalonotus</i> sp.	Pl.17.6, Murphy and Murphy (2000)
	<i>Cyrtophora cicatrosa</i> (Stoliczka 1869)	p66, Koh and Ming (2013)
	<i>Cyrtophora hainanensis</i> Yin et al. 1990	Wan-Azizi (2008)
	<i>Cyrtophora unicolor</i> (Doleschall 1857)	p68, Koh and Ming (2013)
	<i>Eriovixia laglasei</i> (Simon 1877)	Pl.15.1, Murphy and Murphy (2000)
	<i>Gasteracantha crucigera</i> Bradley 1877	p74, Koh and Ming (2013)
	<i>Gasteracantha kuhli</i> Koch 1837	p559, Barrion & Litsinger (1995)
	<i>Gasteracantha mammosa</i> Koch 1844	p34, Koh (1989)
	<i>Gea subarmata</i> Thorell 1890	P568, Barrion & Litsinger (1995)
	<i>Hyposinga pygmaea</i> (Sundevall 1831)	P611, Barrion & Litsinger (1995)
	<i>Macracantha arcuata</i> (Fabricius 1793)	p80, Koh and Ming (2013)
	<i>Neoscona nautica</i> (Koch 1875)	p12, Yong (2009a)
<i>Neoscona vigilans</i> (Blackwall 1865)	p12, Yong (2009a)	
<i>Parawixia dehaani</i> (Doleschall 1859)	p40, Noraina (1999)	
<i>Prasonica</i> sp.	Wan-Azizi (2008)	
Barychelidae	<i>Sason sundaicum</i> Schwendinger 2003	p203, Schwendinger (2003)
Cithaeronidae	<i>Cithaeron praedonius</i> Cambridge 1872	p83, Platnick and Gajbe (1994)
Clubionidae	<i>Clubiona analis</i> Thorell 1895	p132, Jager (2012)
	<i>Clubiona concinna</i> (Thorell 1887)	Pl.22.4, Murphy and Murphy (2000)
	<i>Clubiona hystrix</i> Berland 1938	p104, Deeleman-Reinhold (2001)
	<i>Clubiona japonica</i> Koch 1878	p122, Deeleman-Reinhold (2001)
	<i>Clubiona meraukensis</i> Chrysanthus 1967	p11, Norma-Rashid et al. (2009)
	<i>Malamatidia bohorokensis</i> Deeleman-Reinhold 2001	p193, Deeleman-Reinhold (2001)
	<i>Nusatidia javana</i> Simon 1896	p170, Deeleman-Reinhold (2001)
	<i>Pristidia viridissima</i> Deeleman-Reinhold 2001	p95, Koh and Ming (2013)
	<i>Copa</i> sp.	Pl.23.2, Murphy and Murphy (2000)
	<i>Corinna gulosa</i> (Thorell 1878)	p259, Deeleman-Reinhold (2001)
Corinnidae	<i>Medmassa tigris</i> Deeleman-Reinhold 1995	p102, Koh and Ming (2013)
	<i>Sesieutes abruptus</i> Dankittipakul & Deeleman-Reinhold 2013	p182, Dankittipakul and Deeleman-Reinhold (2013)
	<i>Sesieutes apiculatus</i> Dankittipakul & Deeleman-Reinhold 2013	p186, Dankittipakul and Deeleman-Reinhold (2013)
	<i>Sesieutes bifidus</i> Dankittipakul & Deeleman-Reinhold 2013	p184, Dankittipakul and Deeleman-Reinhold (2013)
	<i>Sesieutes lucens</i> Simon 1897	p178, Dankittipakul and Deeleman-Reinhold (2013)
	<i>Sphecotypus birmanicus</i> (Thorell 1897)	p333, Deeleman-Reinhold (2001)
	<i>Sudesna</i> sp.	Pl.20.8, Murphy and Murphy (2000)
	<i>Urozelotes rusticus</i> (Koch 1872)	Pl.23.8, Murphy and Murphy (2000)
	<i>Alista</i> sp.	Pl.20.7, Murphy and Murphy (2000)
	<i>Plectombolus</i> sp.	p123, Koh and Ming (2013)
Dictynidae		
Gnaphosidae		
Hahnidae		
Linyphiidae		

Continued

Families	Species	Page number, References
Liocranidae	<i>Orthobula</i> sp.	p203, Murphy and Murphy (2000)
	<i>Sphingius vivax</i> (Thorell 1897)	p494, Deeleman-Reinhold (2001)
	<i>Sphingius superbus</i> Dankittipakul, Tavano & Singtripop 2011	p1, Dankittipakul <i>et al.</i> (2011)
	<i>Sphingius bifurcatus</i> Dankittipakul, Tavano & Singtripop 2011	p1, Dankittipakul <i>et al.</i> (2011)
	<i>Sphingius spinosus</i> Dankittipakul, Tavano & Singtripop 2011	p1, Dankittipakul <i>et al.</i> (2011)
	<i>Teutamus apiculatus</i> Dankittipakul, Tavano & Singtripop 2012	p1705, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus brachiatus</i> Dankittipakul, Tavano & Singtripop 2012	p1703, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus calceolatus</i> Dankittipakul, Tavano & Singtripop 2012	p1709, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus deelemanae</i> Dankittipakul, Tavano & Singtripop 2012	p1725, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus globularis</i> Dankittipakul, Tavano & Singtripop 2012	p1713, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus leptothecus</i> Dankittipakul, Tavano & Singtripop 2012	p1723, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus lioneli</i> Dankittipakul, Tavano & Singtripop 2012	p1707, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus politus</i> (Thorell 1890)	p474, Deeleman-Reinhold (2001)
	<i>Teutamus rama</i> Dankittipakul, Tavano & Singtripop 2012	p1699, Dankittipakul <i>et al.</i> (2012)
	<i>Teutamus seculatus</i> Dankittipakul, Tavano & Singtripop 2012	p1715, Dankittipakul <i>et al.</i> (2012)
<i>Teutamus serrulatus</i> Dankittipakul, Tavano & Singtripop 2012	p1701, Dankittipakul <i>et al.</i> (2012)	
Lycosidae	<i>Draposa tenasserimensis</i> (Thorell 1895)	p48, Kronstedt (2010)
	<i>Draposa zhanjiangensis</i> (Yin <i>et al.</i> 1995)	p49, Kronstedt (2010)
	<i>Hippasa holmerae</i> Thorell 1895	Pl.18.6, Murphy and Murphy (2000)
	<i>Pardosa apostoli</i> Barrion & Litsinger 1995	p52, Lau <i>et al.</i> (2012)
	<i>Pardosa pseudoannulata</i> (Bosenberg & Strand 1906)	p371, Yong (2004)
Miturgidae	<i>Cheiracanthium insulanum</i> (Thorell 1878)	p229, Deeleman-Reinhold (2001)
	<i>Cheiracanthium turiae</i> Strand 1916	p235, Deeleman-Reinhold (2001)
Mysmenidae	<i>Maymena</i> sp.	p222, Murphy and Murphy (2000)
Nephilidae	<i>Nephila antipodiana</i> (Walckenaer 1842)	p20, Yong (2009b)
	<i>Nephila kuhli</i> Doleschall 1857	Pl.10.8, Murphy and Murphy (2000)
Ochyroceratidae	<i>Althepeus spiralis</i> Li, Li & Jager 2014	p1, Li <i>et al.</i> (2014)
Oonopidae	<i>Gamasomorpha camelina</i> Simon 1893	Pl.6.1, Murphy and Murphy (2000)
	<i>Gamasomorpha coniacris</i> Eichenberger 2012	p27, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha insomnia</i> Eichenberger 2012	p19, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha ophiria</i> Eichenberger 2012	p21, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha petoteca</i> Eichenberger 2012	p13, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha raya</i> Eichenberger 2012	p30, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha schmilingi</i> Eichenberger 2012	p32, Eichenberger <i>et al.</i> (2012)
	<i>Gamasomorpha squalens</i> Eichenberger 2012	p23, Eichenberger <i>et al.</i> (2012)
	<i>Ischnothyreus namo</i> Kranz-Baltensperger 2012	p43, Kranz-Baltensperger (2012)
	<i>Ischnothyreus tekek</i> Kranz-Baltensperger 2012	p41, Kranz-Baltensperger (2012)
	<i>Ischnothyreus tioman</i> Kranz-Baltensperger 2012	p39, Kranz-Baltensperger (2012)
	<i>Triculana bilingua</i> Eichenberger & Kranz-Baltensperger 2011	p8, Eichenberger and Kranz-Baltensperger (2011)
	Oxyopidae	<i>Hamataliwa floreni</i> Deeleman-Reinhold 2009
<i>Tapponia micans</i> Simon 1885		p147, Koh and Ming (2013)
Pisauridae	<i>Dolomedes mizhoanus</i> Kishida 1936	p11, Norma-Rashid <i>et al.</i> (2009)
	<i>Nilus albocinctus</i> (Doleschall 1859)	p164, Koh and Ming (2013)
Philodromidae	<i>Philodromus</i> sp.	p499, Dzulhelmi and Norma-Rashid (2014)
Pholcidae	<i>Belisana ketambe</i> Huber 2005	p53, Huber (2005)
	<i>Crossopriza Iyoni</i> (Blackwall 1867)	p153, Koh and Ming (2013)
	<i>Pholcus phalangioides</i> (Fuesslin 1775)	p37, Barrion and Litsinger (1995)
	<i>Smeringopus pallidus</i> (Blackwall 1858)	p11, Norma-Rashid <i>et al.</i> (2009)
	<i>Uthina luzonica</i> Simon 1893	p254, Murphy and Murphy (2000)
Prodidomidae	<i>Molycrria voc</i> Deeleman-Reinhold 2001	p556, Deeleman-Reinhold (2001)
Psechridae	<i>Fecenia ochracea</i> (Doleschall 1859)	Pl.21.5, Murphy and Murphy (2000)
	<i>Fecenia protensa</i> Thorell 1891	p1, Bayer (2011)

Continued

Families	Species	Page number, References	
Salticidae	<i>Psechrus libelti</i> Kulczynski 1908	p169, Koh and Ming (2013)	
	<i>Artabrus erythrocephalus</i> (Koch 1846)	Pl.27.3, Murphy and Murphy (2000)	
	<i>Neon sumatranus</i> Logunov 1998	p302, Zabka and Nentwig (2000)	
	<i>Pancorius magnus</i> Zabka 1985	Pl.28.5, Murphy and Murphy (2000)	
	<i>Saaristattus tropicus</i> Logunov & Azarkina 2008	p114, Logunov and Azarkina (2008)	
	<i>Simaetha</i> sp.	Pl.29.7, Murphy and Murphy (2000)	
	<i>Sobasina sylvatica</i> Edmund & Proszynski 2001	p142, Edmunds and Proszynski (2001)	
	<i>Stagetillus opaciceps</i> Simon 1885	Pl.27.8, Murphy and Murphy (2000)	
	<i>Telamonia dimidiata</i> (Simon 1899)	p98, Yong (2008)	
	<i>Telamonia elegans</i> (Thorell 1887)	Pl.27.5, Murphy and Murphy (2000)	
	<i>Thiania demissa</i> (Thorell 1892)	p554, Jackson (1986)	
Scytodidae	<i>Viciria pavesii</i> Thorell 1877	p172, Maimusa (2012)	
	<i>Scytodes lugubris</i> (Thorell 1887)	Pl.5.3, Murphy and Murphy (2000)	
Sparassidae	<i>Scytodes thoracica</i> (Latreille 1802)	P37, Barrion and Litsinger (1995)	
	<i>Gnathopalystes kochi</i> (Simon 1899)	P235, Koh and Ming (2013)	
	<i>Heteropoda davidbowie</i> Jager 2008	p237, Koh and Ming (2013)	
	<i>Heteropoda garciai</i> Barrion & Litsinger 1995	p52, Lau <i>et al.</i> (2012)	
	<i>Heteropoda tetrica</i> Thorell 1897	p240, Koh and Ming (2013)	
	<i>Olios mahabangkawitus</i> Barrion & Litsinger 1995	p52, Lau <i>et al.</i> (2012)	
Telemidae	<i>Sinopoda forcipata</i> (Karsch 1881)	p20, Jager (1999)	
	<i>Telema malaysiaensis</i> Wang & Li 2000	p1, Wang and Li (2010)	
Tetrablemmidae	<i>Brignoliella besutensis</i> Lin, Li & Jager 2012	p55, Lin <i>et al.</i> (2012)	
Tetragnathidae	<i>Tetragnatha ceylonica</i> Cambridge 1869	p513, Barrion and Litsinger (1995)	
	<i>Tetragnatha javana</i> Thorell 1804	p494, Barrion and Litsinger (1995)	
	<i>Tetragnatha nitens</i> (Audouin 1826)	p64, Gillespie (2003)	
Theraposidae	<i>Psednocnemis</i> sp.	p1, West <i>et al.</i> (2012)	
Theridiidae	<i>Anelosimus linda</i> Agnarsson & Zhang 2006	p32, Agnarsson and Zhang (2006)	
	<i>Argyrodes argentatus</i> Pickard-Cambridge 1880	p20, Yong (2009b)	
	<i>Argyrodes flavescens</i> (Pickard-Cambridge 1880)	p20, Yong (2009b)	
	<i>Ariamnes flagellum</i> (Doleschall 1857)	Pl.9.5, Murphy and Murphy (2000)	
	<i>Dipoenura fimbriata</i> Simon 1909	p281, Koh and Ming (2013)	
	<i>Euryopsis</i> sp.	p408, Murphy and Murphy (2000)	
	<i>Meotipa impatiens</i> Deeleman-Reinhold 2009	p289, Koh and Ming (2013)	
	<i>Nesticodes rufipes</i> (Lucas 1846)	Pl.8.5, Murphy and Murphy (2000)	
	<i>Theridula caudata</i> Saito, 1933	Pl.9.3, Murphy and Murphy (2000)	
	<i>Theridion zebrinum</i> Zhu 1998	p297, Koh and Ming (2013)	
	Theridiosomatidae	<i>Epeirotypus dalong</i> Miller, Griswold & Yin 2009	p22, Miller <i>et al.</i> (2009)
		<i>Amyciaea lineatipes</i> Pickard-Cambridge 1901	p40, Noraina (1999)
	Thomisidae	<i>Barboropactus cinerascens</i> (Doleschall 1859)	Pl.26.6, Murphy and Murphy (2000)
		<i>Cebreninus rugosus</i> Simon 1887	p306, Koh and Ming (2013)
		<i>Diaea</i> sp.	p434, Murphy and Murphy (2000)
<i>Phrynarachne ceylonica</i> (Cambridge 1884)		Pl.25.8, Murphy and Murphy (2000)	
<i>Platythomisus octomaculatus</i> (Koch 1845)		p314, Koh and Ming (2013)	
<i>Cryptothele</i> sp.		p333, Koh and Ming (2013)	
<i>Malayozodarion hoiseni</i> Ono & Hashim 2008		p49, Ono and Hashim (2008)	
Zodariidae	<i>Mallinella gombakensis</i> Ono & Hashim 2008	p42, Ono and Hashim (2008)	
	<i>Mallinella maruyamai</i> Ono & Hashim 2008	p44, Ono and Hashim (2008)	
	<i>Mallinella tumidifemoris</i> Ono & Hashim 2008	p49, Ono and Hashim (2008)	
	<i>Storena</i> sp.	p499, Dzulhelmi and Norma-Rashid (2014)	

task due to very limited spider studies in this country. There are many other unidentified spider specimens in our collection that demonstrates a crucial need for extensive collaboration from local

and foreign arachnologists determining and describing many other undescribed species. Besides that, taxonomic revisions has transferred many species to different groups, and introducing new

genera. This had led to many synonymous names erected for some particular genus and species when it is actually referring to the same spider (see Platnick, 2013). On the other hand, some type material species with descriptions were destroyed or lost during previous wars (Benjamin, 2001), or not formally stored for future references making it difficult to clarify the presence of the mentioned species within the

Table II.- New records for spiders of Peninsular Malaysia.

Family Araneidae	
1. <i>Araneus inustus</i> (Koch 1871)	8. <i>Cyrtarachne keralensis</i> Jose 2011
<i>Material examined:</i> 6 female (LACP003), on leaves, night, DMN & MDN., 12.02.2013, L3. <i>Photo/Illustrations:</i> Pl.15, Sebastian and Peter (1999)	<i>Material examined:</i> 1 female (TPP085), on leaves, morning, DMN, 18.06.2012, L10 <i>Photo/Illustrations:</i> p324, Jose (2011)
2. <i>Argiope pulchella</i> Thorell 1881	9. <i>Cyrtophora cylindroides</i> (Walckenaer 1841)
<i>Material examined:</i> 1 female (KPRP010), construct orb-web between branches, night, DMN & SSNP, 18.11.2012, L11. <i>Photo/Illustrations:</i> p267, fig.152C, Song <i>et al.</i> (1999)	<i>Material examined:</i> 1 female (PNP105), on shrubs, by sweep-net, morning, DMN & SSNP, 08.10.2012, L1. <i>Photo/Illustrations:</i> p67, Koh and Ming (2013)
3. <i>Chorizopes bengalensis</i> Tikader 1975	10. <i>Deione</i> sp.
<i>Material examined:</i> 1 female (FH078), on shrubs, night, DMN & SSNP, 21.10.2012, L6. <i>Photo/Illustrations:</i> p270, fig.155D, Song <i>et al.</i> (1999)	<i>Material examined:</i> 1 female (PH241), on shrubs, by sweep-net, morning, DMN & SSNP, 10.10.2012, L2. <i>Photo/Illustrations:</i> p90, Murphy and Murphy (2000)
4. <i>Chorizopes dicavus</i> Yin <i>et al.</i> 1990	11. <i>Eriovixia pseudocentrodes</i> (Bosenberg & Strand 1906)
<i>Material examined:</i> 1 female (FH064), on shrubs, morning, DMN & SSNP, 21.10.2012, L6; 1 F (PH014), on shrubs, morning, DMN & SSNP, 10.10.2012, L2. <i>Photo/Illustrations:</i> p270, 155E, Song <i>et al.</i> (1999)	<i>Material examined:</i> 2 female (RIBG047), on shrubs, night, DMN & SSNP, 25.02.2012, L8. <i>Photo/Illustrations:</i> p71, Koh and Ming (2013)
5. <i>Cyclosa cucurbitoria</i> (Yin <i>et al.</i> 1990)	12. <i>Gasteracantha clavigera</i> Giebel 1863
<i>Material examined:</i> 4 female (FH005), on shrubs, sweep net, morning, DMN & SSNP, 21.10.2012, L6. <i>Photo/Illustrations:</i> p277, fig.160N, Song <i>et al.</i> (1999)	<i>Material examined:</i> 1 female (UG002), on leaves, night, DMN & SSNP, 25.02.2012, L9. <i>Photo/Illustrations:</i> p73, Koh and Ming (2013)
6. <i>Cyclosa dives</i> Simon 1877	13. <i>Heurodes porculus</i> (Simon 1877)
<i>Material examined:</i> 2 female (TPP177), on leaves, morning, DMN, 18.06.2012, L10. <i>Photo/Illustrations:</i> p277, fig160Q, Song <i>et al.</i> (1999)	<i>Material examined:</i> 1 female (UG008), on shrubs, night, DMN & SSNP 14.03.2013, L9. <i>Photo/Illustrations:</i> Pl.12.6, Murphy and Murphy (2000)
7. <i>Cyclosa nigra</i> Yin <i>et al.</i> 1990	14. <i>Larinia phthisica</i> (Koch 1871)
<i>Material examined:</i> 1 female (LACP006), on leaves, morning, DMN & MDN, 12.02.2013, L3; 1 F (FH073), on shrubs, night, DMN & SSNP, 21.10.2012, L6. <i>Photo/Illustrations:</i> p278, fig.161H, Song <i>et al.</i> (1999)	<i>Material examined:</i> 1 female (RIBG247), construct orb-web between shrubs, night, DMN & SSNP, 25.02.2012, L8. <i>Photo/Illustrations:</i> Pl.XIV.S78, Barrion and Litsinger (1995)
	15. <i>Lipocrea fusiformis</i> (Thorell 1877)
	<i>Material examined:</i> 2 female (LACP230), on shrubs, night, DMN & MDN, 14.02.2013, L3. <i>Photo/Illustrations:</i> p79, Koh and Ming (2013)
	16. <i>Mangora foliosa</i> Zhu & Yin 1997
	<i>Material examined:</i> 1 female (UG149), on shrubs, by sweep-net, night, DMN & SSNP, 14.03.2013, L9. <i>Photo/Illustrations:</i> p298, fig.174A, Song <i>et al.</i> (1999)
	17. <i>Neoscona bengalensis</i> Tikader & Bal 1981
	<i>Material examined:</i> 1 female (LACP124), construct orb-web between shrubs, night, DMN & MDN, 14.02.2013, L3. <i>Photo/Illustrations:</i> Pl.13.7, Murphy and Murphy (2000)

18. *Neoscona punctigera* (Doleschall 1857)

Material examined: 2 female (FH117), construct orb-web between branches, night, 22.10.2012, L6.

Photo/Illustrations: p129, Murphy and Murphy (2000)

19. *Neoscona rumpfi* (Thorell 1887)

Material examined: 1 female (MRP064), construct orb-web between shrubs, night, DMN & MDN, 23.02.2013, L4.

Photo/Illustrations: p630, Barrion and Litsinger (1995)

20. *Neoscona theisi* Walckenaer 1841

Material examined: 5 female (LAC009), construct orb-web between shrubs, night, DMN & MDN, 14.02.2013, L3.

Photo/Illustrations: Pl.XV.S83, Barrion and Litsinger (1995)

21. *Pasilobus* sp.

Material examined: 1 female (RIBG470), on shrubs, daylight, DMN & SSNP, 14.02.2013, L3.

Photo/Illustrations: p124, Murphy and Murphy (2000)

22. *Singa perpolita* (Thorell 1892)

Material examined: 1 female (MRP255), on shrubs, night, DMN & MDN, 23.02.2013, L4.

Photo/Illustrations: p87, Koh and Ming (2013)

Family Clubionidae1. *Clubiona krisisensis* Barrion & Litsinger 1995

Material examined: 2 female (FH070), on shrubs, by sweep-net, night, DMN & SSNP, 22.10.2012, L6; 1F (PH025), on shrubs, by sweep-net, morning, L2.

Photo/Illustrations: Pl.1.1, Deeleman-Reinhold (2001)

Family Corinnidae1. *Aetius decollatus* O.P.-Cambridge 1896

Material examined: 1 female (PNP449), under rock, morning, DMN & SSNP, 20.12.2012, L8.

Photo/Illustrations: p335, Deeleman-Reinhold (2001)

2. *Apochinomma nitidum* (Thorell 1895)

Material examined: 1 male (MRP385), on leaves, night, DMN, 10.12.2013, L4.

Photo/Illustrations: p328, Deelemen-Reinhold (2001)

3. *Castianeira zetes* (Simon 1897)

Material examined: 1 female (KS289), on leaves, night, DMN & SSNP, 20.03.2013, L7.

Photo/Illustrations: P.47, Sebastian and Peter (2009)

4. *Medmassa insignis* Thorell 1890

Material examined: 1 female (UG134), on tree bark, night, DMN & TGG, 13.11.2012, L9.

Photo/Illustrations: p101, Koh and Ming (2013)

Family Gnaphosidae1. *Hitobia yaginumai* Deeleman-Reinhold 2001

Material examined: 1 female (UG146), on shrubs, by sweep-net, night, DMN & SSNP, 20.03.2013, L9.

Photo/Illustrations: p512, Deeleman-Reinhold (2001)

Family Linyphiidae1. *Linyphia* sp.

Material examined: 1 female (UG159), under leaves, by sweep-net, night, DMN & TGG, 13.11.2012, L9.

Photo/Illustrations: Pl.58, Sebastian and Peter (1999)

Family Oxyopidae1. *Hamadruas superba* (Thorell 1887)

Material examined: 1 female (TPP093), on leaves, morning, DMN, 12.09.2012, L10; 1F (UG283), on leaves, night, DMN & TGG, 13.11.2012, L9.

Photo/Illustrations: p694, Deeleman-Reinhold (2009)

2. *Hamataliwa incompta* (Thorell 1895)

Material examined: 1 female (RIBG205), on shrubs, morning, DMN & SSNP, 20.12.2012, L8.

Photo/Illustrations: p145, Koh and Ming (2013)

Family Pholcidae1. *Pholcus gracillimus* Thorell 1890

Material examined: 1 male (PNP115), under leaves, by sweep-net, morning, DMN & SSNP, 08.10.2012, L1.

Photo/Illustrations: p250, Murphy and Murphy (2000)

Family Salticidae1. *Burmattus pococki* (Thorell 1895)

Material examined: 1 female (PNP101), under leaves, morning, DMN & SSNP, 08.10.2012, L1.

Photo/Illustrations: p177, Koh and Ming (2013)

2. *Cytaea oreophila* Simon 1902

Material examined: 1 female (TPP042), on leaves, morning, DMN, 12.09.2012, L10.

Photo/Illustrations: Pl.29.4, Murphy and Murphy (2000)

3. *Chrysilla lauta* Thorell 1887

Material examined: 1 female (LACP023), on leaves, morning, DMN & MDN, 12.02.2013, L3.

Photo/Illustrations: p103, Koh (1989)

4. *Epocilla calcarata* (Karsch 1880)

Material examined: 1 female (TPP109), on leaves, morning, DMN, 12.09.2012, L10.

Photo/Illustrations: p188, Koh and Ming (2013)

5. *Menemerus bivittatus* (Dufour 1831)

Material examined: 1 female (TPP150), on shrubs, morning, DMN, 12.09.2012, L10.

Photo/Illustrations: p110, Koh (1989)

6. *Myrmarachne plataleoides* (Cambridge 1869)

Material examined: 1 female (UG214) on shrubs, sweep net, morning, DMN & TGG, 13.11.2012, L9.

Photo/Illustrations: p132, Koh (1989)

7. *Pancorius thorelli* (Simon 1899)

Material examined: 1 female (TPP022), on leaves, morning, DMN, 10.09.2012, L10.

Photo/Illustrations: Pl.28.4, Murphy and Murphy (2000)

8. *Parabathippus macilentus* Thorell 1890

Material examined: 1 female (UG156), on shrubs, morning, DMN & SSNP 14.03.2013, L9.

Photo/Illustrations: p296, Murphy and Murphy (2000)

9. *Parabathippus petrae* (Proszynski and Deeleman-Reinhold 2012)

Material examined: 1 female (RIBG006), on shrubs, morning, DMN & SSNP, 25.12.2012, L8; 1 female (UG145), on shrubs, by sweep-net, morning, 13.11.2012, L9.

Photo/Illustrations: p208, Koh and Ming (2013)

10. *Plexippus petersi* (Karsch 1878)

Material examined: 1 female (MRP012), on shrubs, morning, DMN & MDN, 23.02.2013, L4.

Photo/Illustrations: p114, Koh (1989)

11. *Phintella bifurcilinea* (Bosenberg and Strand 1906)

Material examined: 1 female (RIBG019), on shrubs, morning, DMN & SSNP, 25.12.2012, L8.

Photo/Illustrations: p210, Koh and Ming (2013)

12. *Phintella debilis* (Thorell 1891)

Material examined: 1 female (RIBG201), on shrubs, morning, DMN & SSNP, 25.12.2012, L8.

Photo/Illustrations: p211, Koh and Ming (2013)

13. *Ptocasius montiformis* Song 1991

Material examined: 1 female (PNP110), on leaves, morning,

DMN & SSNP, 08.10.2012, L1; 1 female (PH003), on leaves, by sweep-net, DMN & SSNP, morning, 10.10.2012, L2.

Photo/Illustrations: p557, 313T, Song *et al.* (1999)

14. *Uroballus peckhami* Zabka, 1985

Material examined: 1 female (UG143) on shrubs, morning, DMN & TGG, 13.11.2012, L9.

Photo/Illustrations: Koomen (unpublished)

15. *Viciria praemandibularis* (Hasselt 1893)

Material examined: 1 female (RIBG195) on shrubs, sweep net, morning, DMN & TGG, 11.11.2012, L9.

Photo/Illustrations: p230, Koh and Ming (2013)

Family Sparassidae1. *Heteropoda venatoria* (Linnaeus 1767)

Material examined: 1 female (UG204), on shrubs, night, DMN, & SSNP, 13.11.2012, L9.

Photo/Illustrations: p241, Koh and Ming (2013)

Family Tetragnathidae1. *Mesida yini* Zhu, Song & Zhang 2003

Material examined: 3 female (TPP034), make web on shrubs, night, DMN & SSNP, 10.09.2012, L10.

Photo/Illustrations: p22, Jager and Proxaysombath (2011)

2. *Tetragnatha lauta* Yaginuma 1959

Material examined: 2 female (FH002), morning, grasses by lake side, DMN, 25.09.2012, L6.

Photo/Illustrations: p227, 127R, Song *et al.* (1999)

3. *Tetragnatha pinicola* Koch 1870

Material examined: 3 female (KS049), night, between tree branches, DMN & SSNP, 20.03.2013, L7.

Photo/Illustrations: p228, 128I, Song *et al.* (1999)

4. *Tetragnatha praedonia* Koch 1878

Material examined: 1 female (FH031), night, between tree branches, SSNP, 25.09.2012, L6.

Photo/Illustrations: p228, 128P, Song *et al.* (1999)

5. *Tylorida tianlin* Zhu, Song & Zhang

Material examined: 1 female (FH034), night, at hill slopes, SSNP, 25.09.2012, L6.

Photo/Illustrations: p9401, China Animal Group (2010)

Family Theridiidae1. *Chrysso argyrodiformis* (Yaginuma 1952)

Material examined: 2 female (FH074), on shrubs, night, by sweep-net, DMN & SSNP, 22.10.2012, L6.

Photo/Illustrations: Pl.147, Sebastian and Peter (2009)

2. *Chrysso octomaculata* (Bosenberg & Strand 1906)

Material examined: 2 female (RIBG188), under leaves, morning, by sweep-net, DMN & SSNP, 25.12.2012, L8.

Photo/Illustrations: p426, Barrion and Litsinger (1995)

3. *Latrodectus geometricus* Koch 1841

Material examined: 1 female (KPRP187), on shrubs, by sweep net, night, DMN & SSNP, 18.11.2012, L11.

Photo/Illustrations: p288, Koh and Ming (2013)

4. *Parasteatoda celsabdomina* (Zhu 1998)

Material examined: 4 female (KPRP187), on shrubs, night, by sweep-net, 18.11.2012, L11; 1 female (PNP102), on shrubs, by sweep-net, morning, 08.10.2012, L1.

Photo/Illustrations: p18, Jager and Proxaysombath (2011)

5. *Parasteatoda tapidiorum* (Koch 1841)

Material examined: 3 female (KPRP189), on shrubs, by sweep net, night, DMN & SSNP, 18.11.2012, L11.

Photo/Illustrations: p94, Howell and Jenkins (2004)

6. *Rhomphaea labiata* (Zhu & Song 1991)

Material examined: 1 female (KS288), under leaves, by sweep-net, night, DMN & SSNP, 20.03.2013, L7.

Photo/Illustrations: p295, Koh and Ming (2013)

7. *Theridion tubicola* Doleschall 1859

Material examined: 1 female (PNP103), on shrubs, by sweep-net, morning, DMN & SSNP, 09.10.2012, L1.

Photo/Illustrations: p398, Murphy and Murphy (2000)

Family Thomisidae1. *Mastira bipunctata* Thorell 1891

Material examined: 1 female (RIBG193), on leaves, morning, DMN & SSNP, 25.12.2012, L8.

Photo/Illustrations: p310, Koh and Ming (2013)

2. *Massuria angulata* Thorell 1887

Material examined: 1 female (PH024), on shrubs, sweep net, morning, DMN & SSNP, 10.10.2012, L2.

Photo/Illustrations: p309, Koh and Ming (2013)

3. *Runcinia albostrata* Boesenberg & Strand 1906

Material examined: 1 female (LACP001), on shrubs, night,

DMN & MDN, 12.02.2013, L3.

Photo/Illustrations: Pl.1.S6, Barrion and Litsinger (1995)

4. *Synema globosum* (Fabricius 1775)

Material examined: 1 female (PH028), on shrubs, by sweep-net, morning, DMN, 11.10.2012, L2; 1 female (PH028), on shrubs, by sweep-net, morning, DMN & SSNP, 10.10.2012, L2.

Photo/Illustrations: p499, 282J, Song *et al.* (1999)

5. *Tmarus orientalis* Schenkel 1963

Material examined: 1 female (UG282), on shrubs, night, DMN & SSNP 17.03.2013, L9.

Photo/Illustrations: p515, fig.283J, Song *et al.* (1999)

6. *Thomisus guangxicus* Song and Zhu 1995

Material examined: 1 male (CH003), on shrubs, morning, DMN, 27.01.2013, L5.

Photo/Illustrations: p499, 282F, Song *et al.* (1999)

7. *Xysticus nyingchiensis* Song & Zhu 1995

Material examined: 1 female (KS283), on shrubs, night, DMN & SSNP, 20.03.2013, L7.

Photo/Illustrations: P518, fig.286H, Song *et al.* (1999)

Family Uloboridae8. *Miagrammopes oblongus* Yoshida 1982

Material examined: 1 female (PNP119), on shrubs, by sweep-net, morning, DMN & SSNP, 08.10.2012, L1.

Photo/Illustrations: p326, Koh and Ming (2013)

9. *Uloborus plumipes* Lucas 1846

Material examined: 1 female (RIBG244), on leaves, morning, DMN & SSNP, 25.12.2012, L8.

Photo/Illustrations: p329, Koh and Ming (2013)

Family Zodariidae1. *Asceua gruezoi* Barrion & Litsinger 1992

Material examined: 1 male (TPP248), on tree bark, night, DMN, 11.09.2012, L10.

Photo/Illustrations: p308, Barrion and Litsinger (1995)

region. As difficulties arises particularly during identification of spiders at species level, it is suggested that future work must provide live specimen photographs beside each illustration of genitalia for every species to avoid confusion. Additionally, taxonomic problems should be resolved (Sial and Chaudhry, 2012) and supported

by phylogenetic work. In this way, inaccuracy of species identification, groupings could be tackled in the near future.

CONCLUSIONS

The checklist of spider presented in this paper can increase species inventories preparation to assist in future conservation efforts in this region. A systematic and detailed work survey should be broadened to other habitat ranges including caves, reservoir, tree canopies and ground which would greatly improve the total spider species richness in Malaysia. To summarize, a total of 644 species from 47 families and 320 genera recorded for Peninsular Malaysia.

ACKNOWLEDGEMENTS

We thank Dr. Peter Koomen for the help in the jumping spider species identification. We are thankful to Dzulfeqar Nasir for the illustrations used in this paper. We also thank Dzulhaziq Nasir and Thary Gazi for helping in the specimen collections and anonymous referees for helping to improve the draft of this paper. We acknowledge the Department of Wildlife and National Parks (PERHILITAN) for the permit. This project was funded by MyBrain15 scholarships and University of Malaya IPPP grant (PG096-2012B) awarded to Dzulhelmi M.N.

REFERENCES

- AGNARSSON, I. AND ZHANG, J.X., 2006. New species of *Anelosimus* (Araneae: Theridiidae) from Africa and Southeast Asia, with notes on sociality and color polymorphism. *Zootaxa*, **1147**:1-34
- BARRION, A.T. AND LITSINGER, J.A., 1995. *Riceland spiders of South and South East Asia*. CAB International, Wallingford.
- BAYER, S., 2011. Revision of the pseudo-orbweavers of the genus *Fecenia* Simon 1887 (Araneae, Psechridae), with emphasis on their pre-epigyne. *Zookeys*, **153**:1-56.
- BENJAMIN, S.P., 2001. The genus *Oxytate* L.Koch 1878 from Sri Lanka, with description of *Oxytate taprobane* sp. n (Araneae: Thomisidae). *J. South Asian Nat. Hist.*, **5**: 153-158.
- CHINA ANIMAL GROUP, 2010. *Catalogue of life China*. Online at: <http://animal.eolchina.org/pages/9401> (accessed 19.05.2014).
- DANKITTIPAKUL, P., TAVANO, M. AND SINGTRIPOP, T., 2011. Neotype designation of *Sphingius thecatus* Thorell, 1890, synonymies, new records and descriptions of six new species from Southeast Asia (Araneae, Liocranidae). *Zootaxa*, **3066**: 1-20.
- DANKITTIPAKUL, P., TAVANO, M. AND SINGTRIPOP, T., 2012. Seventeen new species of the spider genus *Teutamus* Thorell, 1890 from Southeast Asia (Araneae: Liocranidae). *J. Nat. Hist.*, **46**: 1689-1730.
- DANKITTIPAKUL, P. AND DEELEMEN-REINHOLD, C.L., 2013. Delimitation of the spider genus *Sesietus* Simon, 1897, with description of five new species from South East Asia (Araneae: Corinnidae). *J. Nat. Hist.*, **47**: 167-195.
- DEELEMEN-REINHOLD, C.L., 2001. *Forest spiders of South East Asia: with revision of the sac and ground spiders (Araneae: Clubionidae, Corinnidae, Liocranidae, Gnaphosidae, Prodidomidae and Trochanterriidae)*. Brill, Leiden, Boston.
- DZULHELMI, M.N. AND NORMA-RASHID, Y., 2014. Spider assemblages in botanical garden, Kuala Lumpur. *Sains Malays*, **43**: 497-502.
- DZULHELMI, M.N., SURIYANTI, S.N.P. AND NORMA-RASHID, Y., 2014. A new *Cyphalonotus* species (Araneae, Araneidae) from Malaysia. *Turk. J. Zool.*, in press.
- EICHENBERGER, B. AND KRANZ-BALTENSPERGER, Y., 2011. New *Trilacuna* species from Thailand, Malaysia and Sumatra (Araneae, Oonopidae). *Zootaxa*, **2823**: 1-31.
- EDMUNDS, M. AND PROSZYNSKI, J., 2001. New species of Malaysian *Agorius* and *Sobasina* (Araneae: Salticidae). *Bull. Br. Arachnol. Soc.*, **12**:139-143.
- EICHENBERGER, B., KRANZ-BALTENSPERGER, Y., OTT R, GRABER, W., NENTWIG, W. AND KROPF, C., 2012. Morphology of new Indian/Indonesian *Gamasomorpha* and *Xestaspis* species (Araneae: Oonopidae). *Zootaxa*, **3160**: 1-68.
- GILLESPIE, R.G., 2003. Marquesan spiders of the genus *Tetragnatha* (Araneae, Tetragnathidae). *J. Arachnol.*, **31**: 62-77.
- HOWELL, W.M. AND JENKINS, R.L., 2004. *Spiders of the Eastern United States*, Pearson Education Inc, Boston.
- HUBER, B.A., 2005. High species diversity, male-female coevolution, and metaphyly in Southeast Asian pholcid spiders: the case of *Belisana* Thorell 1898 (Araneae, Pholcidae). *Zoologica*, **155**:1-126.
- JACKSON, R.R., 1986. Silk utilization and defensive behaviour of *Thiania*, an iridescent jumping spider (Araneae: Salticidae) from Malaysia. *N. Z. J. Zool.*, **13**: 553-561.
- JAGER, P., 1999. *Sinopoda*, a new genus of Heteropodinae (Araneae, Sparassidae) from Asia. *J. Arachnol.*, **27**:19-24.

- JAGER, P., 2007. Spiders from Laos with description of new species (Arachnida: Araneae). *Acta Arachnol.*, **56**: 29-58.
- JAGER, P., 2012. *Clubiona analis* Thorell 1895 from Burma: redescription and systematic position (Araneae: Clubionidae). *J. Arachnol.*, **40**: 131-134.
- JAGER, P. AND PRAXAYSOMBATH, B., 2009. Spiders from Laos: new species and new records (Arachnida: Araneae). *Acta Arachnol.*, **58**: 27-51.
- JAGER, P. AND PRAXAYSOMBATH, B., 2011. Spiders from Laos with forty-three new records and first results from the province Bolikhamxay and Champasak (Arachnida: Araneae). *Acta Arachnol.*, **60**: 9-31.
- JOSE, K.S., 2011. A new species of the genus *Cyrtarachne* (Araneae: Araneidae) from western Ghats, India. *Munis Entomol. Zool.*, **6**: 321-324.
- KOH, J.K.H., 1989. *A guide to common Singapore spiders*, Singapore Science Centre.
- KOH, J.K.H. AND MING, L.T., 2013. *Biodiversity in the heart of Borneo: Spiders of Brunei Darussalam*, Natural History Publications (Borneo).
- KRANZ-BALTENSPERGER, Y., 2012. Three new species of the oonopid spider genus *Ischnothyreus* (Araneae: Oonopidae) from Tioman Island (Malaysia). *Zootaxa*, **3161**: 37-47.
- KRONESTEDT, T., 2010. *Draposa*, a new wolf spider genus from South and Southeast Asia (Araneae: Lycosidae). *Zootaxa*, **2637**: 31-54.
- LI, F., LI, S. AND JAGER, P., 2014. Six new species of the family Ochyroceratidae Fage 1912 (Arachnida: Araneae) from Southeast Asia. *Zootaxa*, **3768**: 119-138.
- LIN, Y., LI, S. AND JAGER, P., 2012. Two new species of the family Tetrablemmidae (Araneidae) from Laos and Malaysia. *Zootaxa*, **3475**: 55-64.
- LAU, W.H., MOHD-ARIF, M.H. AND CHOOI, Y.S., 2012. Prey preference of four species of forest spiders to *Spodoptera litura* and *Plutella xylostella*. *Pertanika J. Trop. Agric. Sci.*, **35**: 49-56.
- LOGUNOV, D.V. AND AZARKINA, G.N., 2008. Two new genera and species of Euophryinae (Araneidae: Salticidae) from SE Asia. *Arthropoda Selecta.*, **17**: 111-115.
- MAIMUSA, A.H., 2012. Spiders in *Aedes* Mosquitoes infested areas in University Campus in Serdang, Malaysia. *Asian J. Exp. Biol. Sci.*, **3**: 170-174.
- MILLER, J.A., GRISWOLD, C.E. AND YIN, C.M., 2009. The symphytognathoid spiders of the Gaoligongshan, Yunnan, China (Araneae, Araneioidea): Systematics and diversity of micro-orbweavers. *Zookeys*, **11**: 9-195.
- MURPHY, F. AND MURPHY, J., 2000. *An Introduction to the Spiders of South East Asia*. Malayan Nature Society, Kuala Lumpur.
- NORAINA, M., 1999. *Diversiti, kelakuan dan aspek-aspek berkaitan labah-labah*, BSc. dissertation, Kuala Lumpur, Malaysia: University of Malaya.
- NORMA-RASHID, Y. AND LI, D., 2009. A checklist of spiders (Arachnida: Araneae) from peninsular Malaysia inclusive of twenty new records. *The Raffles B. Zool.*, **57**: 305-322.
- NORMA-RASHID, Y., RAHMAN, N.A. AND LI, D., 2009. Mangrove spiders (Araneae) of Peninsular Malaysia. *Int. J. Zool. Res.*, **5**: 9-15.
- ONO, H. AND HASHIM, R., 2008. Four new species of the family Zodariidae (Araneae) from Malaysia. *Mem. Nat. Mus. Sci. Tokyo*, **45**: 41-51.
- PLATNICK, N.I., 2013. *The world spider catalog, version 14*. The American Museum of Natural History. Online at: <http://research.amnh.org/iz/spiders/catalog/> (accessed 9.11.2013).
- PLATNICK, N.I. AND GAJBE, U.A., 1994. Supplementary notes on the ground spider family Cithaeronidae (Araneae, Gnaphosidae). *J. Arachnol.*, **22**: 82-83.
- SCHWENDINGER, P.J., 2003. Two new species of the arboreal trapdoor spider genus *Sason* (Araneae: Barychelidae) from Southeast Asia. *The Raffles B. Zool.*, **51**: 197-207.
- SEBASTIAN, P.A. AND PETER, K.V., 2009. *Spiders of India*. Universities Press (India) Private Limited, Hyderabad, pp. 614.
- SIAL, N. AND CHAUDHRY, M.S., 2012. A preliminary report on the diversity of spiders (Arachnida: Araneae) in the Cholistan Desert, Pakistan. *Pakistan J. Zool.*, **44**: 1439-1442.
- SONG, D.X., ZHANG, J.X. AND LI, D., 2002. A checklist of spiders from Singapore (Arachnida: Araneae). *The Raffles B. Zool.*, **50**: 359-388.
- SONG, D.X., MINGSHENG, Z. AND JUN, C., 1999. *The spiders of China*. Hebei Science and Technology Publishing House, Shijiazhuang, pp. 640.
- WAN-AZIZI, W.Z., 2008. *The Diversity and Behavioural Ecology of Webbing Spiders in Carey Island*. BSc. dissertation. Kuala Lumpur, Malaysia: University of Malaya.
- WANG, C. AND LI, S., 2010. Four new species of the spider genus *Telema* (Araneae, Telemidae) from Southeast Asia. *Zootaxa*, **2719**: 1-20.
- WEST, R.C., STEVEN, C.N. AND HOGG, S., 2012. A new tarantula genus, *Pseudocnemis*, from West Malaysia (Araneae: Therapsidae), with cladistics analyses and biogeography of Selenocosmiinae Simon 1889. *Zootaxa*, **3299**: 1-43.
- YONG, H.S., 2004. *Arachnida: Araneae*. In Yule, C.M. and Yong, H.S. *Freshwater Invertebrates of the Malaysian region*. Academy of Science Malaysia.
- YONG, H.S., 2008. *Telamonia dimidiata* and *Phintella versicolor* (Arachnida: Salticidae): two new records for Peninsular Malaysia. *J. Sci. Techn. Tropics.*, **4**: 97-98.
- YONG, H.S., 2009a. *Neoscona vigilans* (Arachnida: Araneae,

- Araneidae): a new record of orb-web spider from Peninsular Malaysia. *J. Sci. Techn. Tropics.*, **5**: 11-12.
- YONG, H.S., 2009b. *Nephila antipodiana* (Araneae: Nephilidae) from Pahang: a new record for Peninsular Malaysia. *J. Sci. Techn. Tropics.*, **5**: 19-21.
- ZABKA, M. AND NENTWIG, W., 2000. Salticidae (Arachnida: Araneae) of the Krakatau Islands (Indonesia), A preliminary approach. *Ekologia*, **19**: 293-306.

(Received 19 March 2014, revised 13 August 2014)