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The wolf spider genus *Artoria* in New South Wales and the Australian Capital Territory, Australia (Araneae, Lycosidae, Artoriinae)

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Abstract

The wolf spider (Lycosidae Sundevall, 1833) genus *Artoria* Thorell, 1877 is revised for New South Wales and the Australian Capital Territory, Australia, to include 34 species, 21 of which are new to science: *A. albopilata* (Urquhart, 1893), *A. alta* Framenau 2004, *A. beaury* **sp. n.**, *A. barringtonensis* **sp. n.**, *A. belfordensis* **sp. n.**, *A. berenice* (L. Koch, 1877), *A. bondi* **sp. n.**, *A. booderee* **sp. n.**, *A. comleroi* **sp. n.**, *A. corowa* **sp. n.**, *A. equipalus* **sp. n.**, *A. extraordinaria* **sp. n.**, *A. flavimana* Simon, 1909, *A. gloriosa* (Rainbow, 1920), *A. grahammilledgei* **sp. n.**, *A. helensmithae* **sp. n.**, *A. howquaensis* Framenau, 2002, *A. kanangra* **sp. n.**, *A. kerewong* **sp. n.**, *A. lineata* (L. Koch, 1877), *A. maroota* **sp. n.**, *A. mckayi* Framenau, 2002, *A. mungo* **sp. n.**, *A. munmorah* **sp. n.**, *A. myallensis* **sp. n.**, *A. quadrata* Framenau, 2002, *A. slatyeri* **sp. n.**, *A. strepera* **sp. n.**, *A. taeniifera* Simon, 1909, *A. terania* **sp. n.**, *A. triangularis* Framenau, 2002, *A. ulrichi* Framenau, 2002, *A. victoriensis* Framenau, Gotch & Austin, 2006, and *A. wilkiei* **sp. n.** *Lycosa pruinosa* L. Koch, 1877, currently listed in *Artoria*, is considered a nomen dubium. *Artoria* are largely forest dwellers, although some species have preferences for more open areas such as riparian or coastal environments or grasslands. Consequently, the genus mainly occurs east and west along the Great Dividing Range, although some species can be found into the Riverina, Cobar Peneplain and Darling Riverine Plains IBRA regions to the west.

Introduction

The genus wolf spider genus *Artoria* Thorell, 1877 includes small, free-roaming spiders with a fairly uniform morphology. They are overall brown in colouration, with variably lighter central and marginal areas on the carapace and often with a light cardiac mark on an otherwise variably mottled abdomen (Fig. 1A–D). These spiders are somewhat sexually dimorphic, i.e. males are slightly smaller than females and often more distinctly coloured. In addition, males may have modifications of the first pair of legs, for example brush-legged males such as *A. schizocoides* Framenau & Hebets, 2007 (Framenau and Hebets 2007), or pedipalp ornamentations such as conspicuously white setae as in *Artoria mckayi* Framenau, 2002 (Fig. 1A). Such ornamentations have been shown to play an important role in the courtship behaviour in other wolf spiders (e.g., Framenau and Hebets 2007; Hebets and Vink 2007; Shamble et al. 2009).

Artoria has an Oriental-Pacific distribution and currently includes 32 species (World Spider Catalog 2018). Twenty-one species are described from Australia (Framenau 2002; 2004; 2005; 2008; Framenau and Hebets 2007), three occur in New Zealand (Vink 2002), two

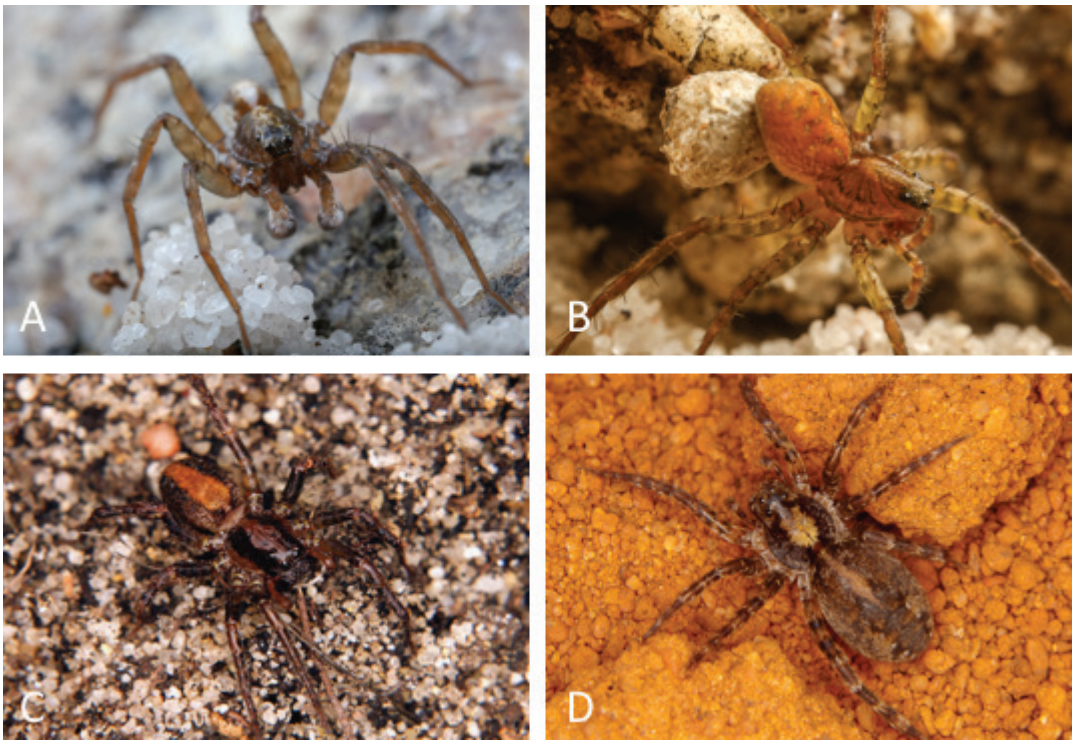

Figure 1. Life images of *Artoria* species. **A**, *A. mckayi* Framenau, 2002 (male from Avon River, Victoria); **B**, *A. mckayi* (female with eggsac from Avon River, Victoria); **C**, *A. flavimana* Simon, 1909 (female from Capel, Western Australia); **D**, *A. taeniifera* Simon, 1909 (female from Ravensthorpe, Western Australia). All species occur in New South Wales; *A. mckayi* has also been found in the Australian Capital Territory.

in China (Li et al. 2012), four on Pacific islands (New Caledonia, Vanuatu, New Hebrides, Samoa, Marquesas), and two in South-East Asia (Papua New Guinea, Philippines, Indonesia) (World Spider Catalog 2018). Three species of *Artoria* are currently described from Africa; however, their original descriptions suggest they are misplaced in the genus (Framenau 2002).

In Australia, species of the genus *Artoria* are most common in the Bassian and Torresian bioregions, i.e. along the eastern coast, in the south-east (including Tasmania), in south-western Western Australia and in the tropical northern parts of the country. Very few records are from the interior and these are often from near intermittent or permanent water bodies (Framenau et al. 2006). *Artoria* species often occur in forests and woodlands, although some species appear to prefer open habitats or riparian environments (Framenau et al. 2006; Framenau et al. 2002).

Prior to this study, 13 species of *Artoria* were known from New South Wales (NSW) and the Australian Capital Territory (ACT). The Bush Blitz survey to Mungo National Park in 2017 (see http://www.bushblitz.org.au; accessed 20 October 2018) resulted in the discovery of a new species of *Artoria* which provided the opportunity to apply for funding to resolve the taxonomy of the genus in the region. Previous studies by the senior author suggested a considerable biodiversity of the genus in the eastern part of Australia. Therefore, the aim of this study was to comprehensively revise all species of *Artoria* in NSW and the ACT.

Material and methods

This study is based on the examination of 1,580 records (vials) including 2,760 males and 1,389 females of *Artoria* from NSW (1,554 records) and the ACT (26 records) in mainly the Australian Museum, Sydney, and the Australian National Insect Collection, Canberra, supplemented by material from other Australian and overseas institutions (see abbreviations of institutions below). Descriptions are based on spiders stored in 70% ethanol, preferable using recent and representative material in lieu of poorly preserved historical type specimens.

For examination and illustration, female internal genitalia were placed in a Pancreatin solution for a few hours as described in Álvarez-Padilla and Hormiga (2007) to clear soft tissue. Male pedipalps were dissected by removing the bulb from the cymbium and carefully detaching the palea region from the tegulum.

Digital images were taken using a Leica DFC 500 digital camera attached to a Leica MZ16A stereo microscope. To increase depth of field, multiple images were merged using the software package AutoMontage Pro Version 5.02 (p).

All measurements are in millimetres (mm). Morphological nomenclature follows Framenau (2007).

Life history data as described for each species generally refer to populations from New South Wales or the Australian Capital Territory. If species are more widespread and occur in different climatic zones (i.e. in

Queensland or Tasmania), it is possible phenological data varies from those described here.

Distribution data of all *Artoria* species are interpreted and mapped based on the Interim Biogeographical Regionalisation of Australia (IBRA) (Department of the Environment and Energy 2016; Thackway and Cresswell 1995). Maps were compiled in the software package QGis v. 3.01 Girona (https://qgis.org/en/site/; accessed 1 October 2018). Geographic coordinates were extracted directly from original labels or the registration data as provided by the institutions. When no detailed geographic information was available, localities were approximated based on Google Earth v. 9.1.39.3

Abbreviations

Anatomy

AE anterior eyes
ALE anterior lateral eyes
AME anterior median eyes
PLE posterior lateral eyes
PME posterior median eyes
TA tegular apophysis
BA basoembolic apophysis

Institutions

AM Australian Museum, Sydney
ANIC Australian National Insect Collection, Canberra
MMUS Macleay Museum, University of Sydney (today housed in AM)
MNHP Museum National d'Histoire Naturelle, Paris
NMV Museum Victoria, Melbourne
QM Queensland Museum, Brisbane
SAM South Australian Museum, Adelaide
WAM Western Australian Museum, Perth
ZMB Museum für Naturkunde, Leibniz Institute for Evolution and Biodiversity Science, Berlin, Germany
ZSMH Zoologisches Institut und Zoologisches Museum, Universität Hamburg (today CeNak, Centrum für Naturkunde, Universität Hamburg), Germany
ZMUC Zoologisk Museum, Statens Naturhistoriske Museum, Københavens Universitet, Denmark

Results and discussion

This revision recognizes 34 species of *Artoria* in NSW, five of which currently also known from the ACT (Table 1). Eight species are known only from males and therefore require further survey and taxonomic research to identify the respective females. A number of undescribed females are still present in the collection of the Australian Museum. It was impossible to unequivocally assign these to a male described here. In total, 1,465 of the 1,580 examined vials of *Artoria* from NSW and ACT (= 92%) can be attributed to a described species following this study.

Table 1. Distribution of *Artoria* species currently known from New South Wales and Australian Capital Territory.

Species	Current known distribution	Sexes known	Comments
A. albopilata (Urquhart, 1893)	ACT, NSW–Qld, SA, Tas, Vic	M, F	
A. alta Framenau, 2004	NSW	M, F(?)	conspecifity of female with type material unclear; SRE
A. barringtonensis sp. n.	NSW	M	Known only from type locality; SRE
A. beaury sp. n.	NSW	M, F	
A. belfordensis sp. n.	NSW	M, F	
A. berenice (L. Koch, 1877)	NSW–Qld, Tas, Vic; also, Vanuatu and New Caledonia	M, F	
A. bondi sp. n.	NSW	M	Known only from type locality; SRE
A. booderee sp. n.	NSW	M, F	SRE
A. comleroi sp. n.	NSW	M, F	Known only from type locality; SRE
A. corowa sp. n.	NSW	M, F	
A. equipalus sp. n.	NSW	M, F	Known only from type locality; SRE
A. extraordinaria sp. n.	NSW	M, F	
A. flavimana Simon, 1909	ACT, NSW–SA, Tas, Vic, WA	M, F	
A. gloriosa (Rainbow, 1920)	NSW	M, F	Endemic to Lord Howe Island; SRE
A. grahammilledgei sp. n.	NSW–Qld	M, F	
A. helensmithae sp. n.	NSW–Vic	M, F	
A. howquaensis Framenau, 2002	NSW–SA, Vic	M, F	
A. kanangra sp. n.	NSW	M	SRE
A. kerewong sp. n.	NSW	M	Known only from type locality; SRE
A. lineata (L. Koch, 1877)	ACT, NSW–Qld, SA, Tas, Vic	M, F	
A. maroota sp. n.	NSW	M	
A. mckayi Framenau, 2002	ACT, NSW–Qld, SA, Tas, Vic	M, F	
A. mungo sp. n.	NSW	M, F	
A. munmorah sp. n.	NSW	M, F	
A. myallensis sp. n.	NSW	M	Known only from type locality; SRE
A. quadrata Framenau, 2002	ACT, NSW–Qld, Vic	M, F	
A. slatyeri sp. n.	NSW	M	SRE
A. strepera sp. n.	NSW	M	SRE
A. taeniifera Simon, 1909	NSW–SA, WA	M, F	
A. terania sp. n.	NSW–Qld	M, F	
A. triangularis Framenau, 2002	NSW–Qld, SA, Tas, Vic	M, F	
A. ulrichi Framenau, 2002	NSW–Vic	M, F	
A. victoriensis Framenau, Gotch & Austin, 2006	NSW–Qld, SA, Tas, Vic	M, F	
A. wilkiei sp. n.	NSW	M, F	

ACT – Australian Capital Territory; NSW – New South Wales; Qld – Queensland; SA – South Australia; Tas – Tasmania; Vic – Victoria; WA – Western Australia; SRE – short-range endemic (e.g. Harvey 2002)

The distribution of *Artoria* species in NSW and the ACT corresponds largely with the forests east and west of the Great Dividing Range, although some species are clearly coastal (for example *A. booderee* sp. n. and

A. strepera sp. n.). Some occur further into central NSW (for example *A. victoriensis* Framenau, Gotch & Austin, 2006 and *A. howquaensis* Framenau, 2002). Twelve species are currently known only from their type localities or from very small ranges and should be considered short- or narrow range endemic species (Harvey 2002; New and Sands 2002; Ponder and Colgan 2002) (Table 1). These are therefore of elevated conservation concern.

This regional review focussing on a single geographic state and one territory doubles the number of species of *Artoria* in Australia, demonstrating the high diversity of the genus in this country. At least 15 undescribed species of *Artoria* are known from Western Australia (V.W. Framenau, unpublished data) and similar ratios of undescribed to described species can be expected from other states. A conservative estimate for the total number of species of *Artoria* in Australia is 150–180 species, thereby likely representing the largest genus of Australian wolf spiders and a considerable challenge for taxonomic research.

This study documents a considerable morphological diversity of *Artoria* in NSW and the ACT. Some informal species groups of putatively more closely-related species can be distinguished, for example a '*lineata*-group', including *A. lineata*, *A. quadrata* and *A. ulrichi*, in which males have a spoon-shaped tegular apophysis, or a *booderee*-group (*A. booderee* sp. n., *A. corowa* sp. n., *A. equipalus* sp. n. and *A. munmorah* sp. n.), having small spiders in which males have a two-lobed tegular apophysis. Other species, such as *A. extraordinaria* sp. n., have an unusual genital morphology for *Artoria*, with no known similar species. It is possible future phylogenetic research will consider these groups or species discernible at the genus level. However, as the currently described fauna of *Artoria* only represents a fraction of the species present in Australia based on artificial geographic boundaries, a more comprehensive taxonomic documentation is required to formulate testable phylogenetic hypotheses at the genus level. This analysis should include representatives from the total distribution range of *Artoria* and other genera of the Artoriinae, a subfamily that reaches into China and the Pacific Ocean (Framenau 2007; Li et al. 2012; Vink 2002; World Spider Catalog 2018). *Artoria howquaensis* is the morphologically closest species of this study to the type species of *Artoria*, *A. parvula* Thorell, known from China to northern Australia (Framenau 2005; Li et al. 2012).

Taxonomy

Family Lycosidae Sundevall, 1833
Subfamily Artoriinae Framenau, 2007

Genus *Artoria* Thorell, 1877

Australian Forest Runners

Artoriella Roewer, 1960 (synonymy established in Framenau, 2002: 210)

Lycosula Roewer, 1960 (synonymy established in Framenau 2007: 5)

Trabaeola Roewer, 1960 (synonymy established in Framenau 2002: 210)

Type species. *Artoria parvula* Thorell, 1877, by original designation (Thorell 1877).

Diagnosis. In NSW and the ACT, five genera of the subfamily Artoriinae have been found: *Artoria*, *Artoriopsis* Framenau, 2007, *Diahogna* Roewer, 1960, *Kangarosa* Framenau, 2010 and *Tetralycosa* Roewer, 1960. The row of the anterior eyes in the latter three genera is generally wider than the row of the posterior median eyes and therefore these genera are thought to form a natural group (Framenau 2006, 2010; Framenau and Hudson 2017). In contrast, species in *Artoria* (Fig. 2A–E) and *Artoriopsis* generally have the anterior eye row narrower than the posterior median eye row. *Artoriopsis* differs from *Artoria* by a more elongated carapace that is adorned by distinct light lateral bands, and a distinct colouration of the abdomen with a central diamond-shaped black spot (with the exception of *Artoriopsis whitehouseae* Framenau, 2007, which has a black abdomen with irregular light central band (Framenau 2007)). There are also genus-specific differences between the male pedipalps of all genera, specifically with respect to the basoembolic and tegular apophyses. For example, the tegular apophyses in *Diahogna*, *Kangarosa* and *Tetralycosa* are generally wider at the base than apically, whereas in *Artoria* they are narrow at the base and widen apically. The tegular apophysis of *Artoriopsis* is variable and in general most similar to that of *Artoria*, but the genera are easily distinguished by the somatic characters above.

Description (after Framenau 2002). Small to medium-sized wolf spiders (total length ca. 2.5–10 mm); males slightly smaller than females; carapace brown to black with darker radial pattern; light median and lateral bands sometimes present; abdomen brown to dark grey, often with mottled pattern and mostly with a light lanceolate heart mark; carapace longer than wide, dorsal profile straight in lateral view; head flanks in frontal view steep in most males but may be a gentle slope in females.

Chelicerae with three (rarely one or two) promarginal and three (rarely one or two) retromarginal teeth; labium as long as or slightly longer than wide; leg formula IV>I>I>III; tegular apophysis located apically at tegulum and of variable shape; basoembolic apophysis broad, heavily sclerotised and bent ventrally; embolus of varying shape (slim to very thick); terminal apophysis functioning as conductor, sometimes forming a groove for the resting embolus; most species with varying number of macrosetae at tip of male cymbium; a scopulate patch of setae occasionally present dorsally on cymbium. Epigyne variable, a simple opening of varying shape or covered by a sclerotised ovoid plate.

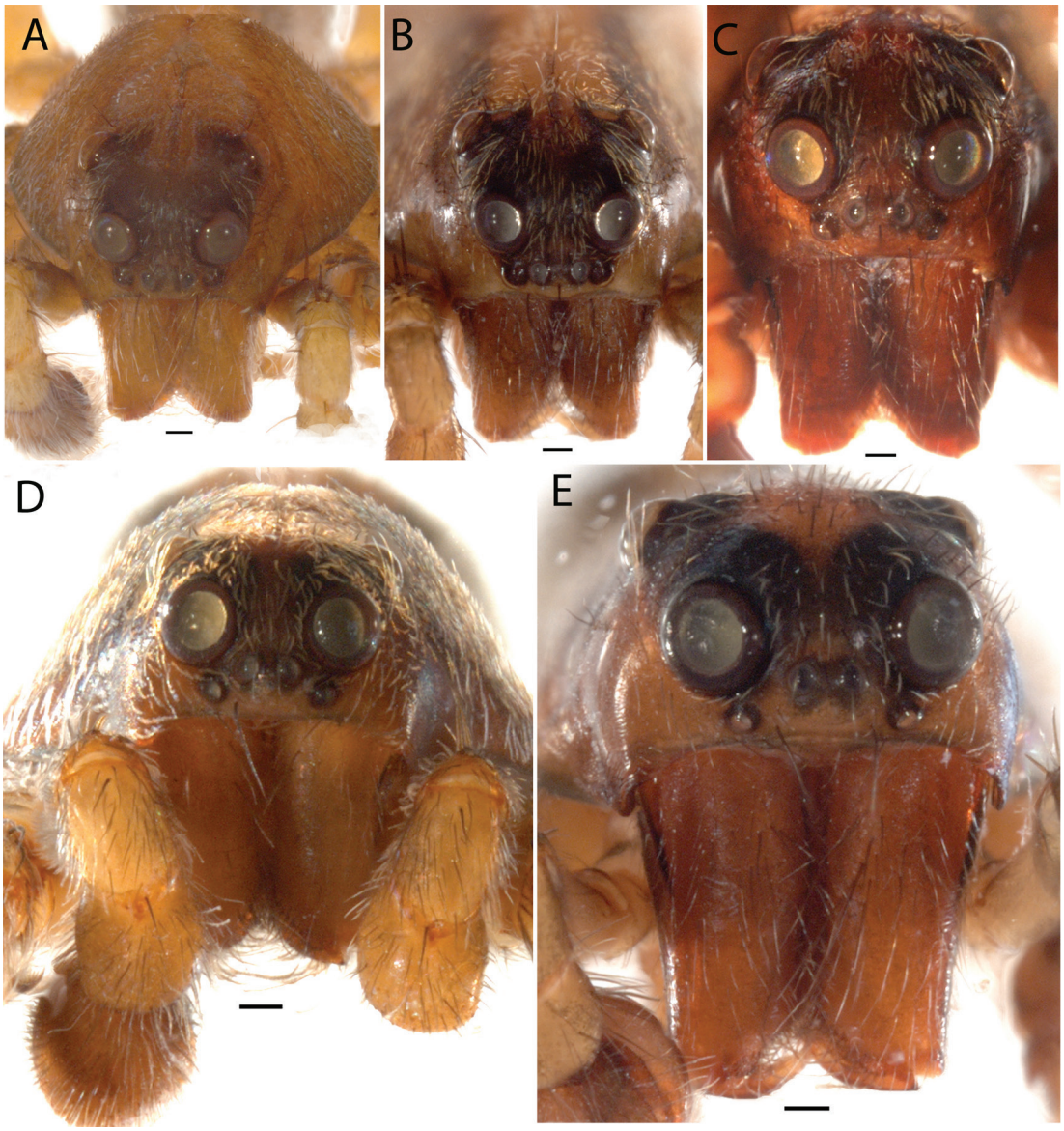

Figure 2. *Artoria* males, anterior eye row, frontal view: **A**, *A. strepera* sp. n. (AM KS127760) straight, evenly spaced; **B**, *A. barringtonensis* sp. n. (AM KS122794) straight, distance between AME/AME at least twice of AME/ALE.; **C**, *A. kanangra* (KS45008) slightly procurved, evenly spaced; **D**, *A. belfordensis* sp. n. (AM KS127759) eyes strongly procurved, evenly spaced.; **E**, *A. extraordinaria* sp. n. (AM KS128074) eyes strongly procurved, distance between AME/ALE at least twice AME/AME. Scale bars: 0.1 mm.

Key to species of the genus *Artoria* from NSW and ACT

1 Males 2
– Females (unknown for *A. barringtonensis* sp. n., *A. bondi* sp. n., *A. kanangra* sp. n., *A. kerewong* sp. n., *A. maroota* sp. n., *A. myallensis* sp. n., *A. slatyeri* sp. n., *A. strepera* sp. n.) 35
2 Anterior eye row straight (Fig. 2A, B) 3
– Anterior eye row procurved, i.e. anterior lateral eyes are lower than anterior median eyes in frontal view (Fig. 2C–E) ... 8
3 Distance between AME/AME at least twice of AME/ALE (Fig. 2B) ..... *A. barringtonensis* sp. n.
– Anterior eyes evenly spaced (Fig. 2A) 4
4 Dorsal scopula patch on cymbium absent (Fig. 6H) ..... *A. bondi* sp. n.
– Dorsal scopula patch on cymbium present (Fig. 13F) 5
5 Palea about twice as long as wide, basoembolic apophysis large rounded (Fig. 48E) ..... *A. slatyeri* sp. n.
– Palea shorter (Figs 46F, 47E, 48F) 6
6 Palea about 1.5 times as long as wide, basoembolic apophysis large triangular (Fig. 47E) ..... *A. booderee* sp. n.
– Palea about as long as wide (Figs 46F, 48F) 7

7 Basoembolic apophysis (BA) rounded (Fig. 46F) ..... *A. albopilata*
– BA triangular (Fig. 48F) ..... *A. strepera* sp. n.
8 Anterior eye row strongly procurved (Fig. 2D) 9
– Anterior eye row slightly procurved (Fig. 2C) 16
9 Distance between AME/ALE at least twice of AME/AME (Fig. 2E) ..... *A. extraordinaria* sp. n.
– Anterior eye row evenly spaced (Fig. 2D) 10
10 Dorsal scopula patch on cymbium absent (Figs 9F, 17F, 38F) 11
– Dorsal scopula patch on cymbium present (Figs 14F, 16F, 25F) 14
11 Palea about as long as wide (Fig. 47H) ..... *A. equipalus* sp. n.
– Palea about twice as long as wide (Figs 47C, 48G) 12
12 Tegular apophysis (TA) three-lobed (Fig. 9E) ..... *A. belfordensis* sp. n.
– TA distinctly two-pronged (Fig. 38E) ..... *A. taeniifera*
14 Palea about as long as wide (Fig. 47F) ..... *A. comleroi* sp. n.
– Palea about 1.5 times as long as wide (Figs 46J, 47G) 15
15 BA large triangular, embolus straight (Fig. 47G) ..... *A. corowa* sp. n.
– BA rounded, embolus apically coiled (Fig. 46J) ..... *A. howquaensis*
16 Dorsal scopula patch on cymbium absent (Figs 7F, 19F, 24F, 28F, 35F, 42F) 17
– Dorsal scopula patch on cymbium present (Figs 5F, 20F, 29D, 39F, 45F) 24
17 Anterior spinnerets ventrally pale (Fig. 19B) ..... *A. flavimana*
– Anterior spinnerets ventrally dark grey (Figs 24B, 26F, 28B, 35B, 42B) 18
18 Palea about twice as long as wide (Figs 46A, 48A) 19
– Palea about 1.5 times as long as wide (Fig. 47B, K) 20
– Palea about as long as wide (Figs 46B, C, H, I) 21
19 Embolus broad, basally curved (Fig. 48A) ..... *A. kerewong* sp. n.
– Embolus thin and basal edge straight, tegular apophysis large spoon-shaped (Fig. 46A) ..... *A. lineata*
20 TA without retrolateral hook (Fig. 7E) ..... *A. beaury* sp. n.
– TA with strong retrolateral hook (Fig. 24E) ..... *A. helensmithae* sp. n.
21 TA distally scooped, basally not narrowed, tip with central spike (Fig. 11E) ..... *A. berenice*
– TA distally widely scooped, basally narrowed to 1/4 (Figs 35E, 42E, 43E) 22
22 TA rounded, without retrolaterally pointed tip (Fig. 42E) ..... *A. ulrichi*
– TA with retrolaterally pointed tip (Figs 35E, 43E) 23
23 TA tip prolaterally semicircular (Fig. 35E) ..... *A. quadrata*
– TA tip prolaterally s-shaped (Fig. 43E) ..... *A. victoriensis*
24 Anterior spinnerets ventrally pale (Figs 5B, 20B, 29B, 45B) 25
– Anterior spinnerets ventrally dark grey (Fig. 39B, 40B) 30
25 TA finger-shaped, basally not narrowed (Fig. 20E) ..... *A. gloriosa*
– TA basally narrowed (Figs 5E, 45E) 26
26 TA tip without appendices, nearly semi-circular, with central hook (Fig. 5E) ..... *A. alta*
– TA tip with appendices, not semi-circular (Fig. 29C) 27
27 BA triangular, TA inverted L-shaped with distal hook (Fig. 29C) ..... *A. maroota* sp. n.
– BA rounded (Figs 46G, 48I) 28
28 BA large occupies prolateral part of palea (Fig. 48I) ..... *A. wilkiei* sp. n.
– BA smaller only in dorso-prolateral part of palea (Figs 29G, 46G) 29
29 TA tip long pointed directed prolaterally (Fig. 31E, F) ..... *A. mckayi*
– TA tip distally deeply indented building 2 appendices (Fig. 29G, H) ..... *A. myallensis* sp. n.
30 Palea about twice as long as wide, basoembolic apophysis triangular (Figs 47J, 48H) 31
– Palea shorter (Figs 46K, 47L, 48C) 32
31 TA distally widely scooped, basally narrowed to 1/3 (Fig. 39E) ..... *A. terania* sp. n.
– TA basally narrowed to 1/2 (Fig. 22E) ..... *A. grahammilledgei* sp. n.
32 Palea about 1.5 times as long as wide, basoembolic apophysis triangular (Figs 47L, 48C) *33*
– Palea about as long as wide (Figs 46K, 48D) 34
33 TA inverted L-shaped (Fig. 32E) ..... *A. mungo* sp. n.
– TA birdhead-shaped (Fig. 26C) ..... *A. kanangra* sp. n.
34 TA medially widened, tip distally pointed, not reaching cymbium (Fig. 40E) ..... *A. triangularis*
– TA medially constricted, tip bent deeply indented, reaching cymbium (Fig. 33E) ..... *A. munmorah* sp. n.
35 Anterior eye row straight, anterior eyes evenly spaced (Fig. 2A) 36
– Anterior eye row procurved (Fig. 2C–E) 38
36 Atrium narrow, inverted U-shaped, spermathecal heads 2x diameter apart (Fig. 13H) ..... *A. booderee* sp. n.
– Atrium wide semicircular, spermathecal heads 1 diameter apart (Figs 3H, 17H) 37

37 Spermathecal heads globular (Fig. 17H) ..... *A. equipalus* sp. n.
– Spermathecal heads sausage-shaped (Fig. 3H) ..... *A. albopilata*
38 Anterior eye row strongly procurved (Fig. 2D, E) 39
– Anterior eye row slightly procurved (Fig. 2C) 43
39 Distance between AME/ALE at least twice of AME/AME (Fig. 2E) ..... *A. extraordinaria* sp. n.
– Anterior eye row evenly spaced (Fig. 2D) 40
40 Atrium with 2 large oval copulatory openings, stalks connected medially (Fig. 16G, H) ..... *A. comleroi* sp. n.
– Atrium different, stalks not medially connected (Figs 14H, 17H, 38G) 41
41 Atrium inverted U-shaped or obscure, without scapus (Figs 17G, 38G) 42
– Atrium with w-shaped scapus (Fig. 14G) ..... *A. corowa* sp. n.
42 Stalks short, connected posteriorly to spermathecal head (Fig. 17H) ..... *A. equipalus* sp. n.
– Stalks long, connected laterally to spermathecal heads (Fig. 38H) ..... *A. taeniifera*
– Stalks slightly S-shaped, connected postero-laterally to spermathecal heads (Fig. 9H) ..... *A. belfordensis* sp. n.
43 Spermathecal heads massive, almost touching medially (Figs 22H, 39H, 45H) 44
– Spermathecal heads smaller, not touching medially (Figs 20H, 42H, 43H) 46
44 Spermathecal heads massive globular (Fig. 45H) ..... *A. wilkiei* sp. n.
– Spermathecal heads massive ellipsoid (Figs 22H, 39H) 45
45 Atrium almost rectangular (Fig. 22G) ..... *A. grahammilledgei* sp. n.
– Atrium almost bell-shaped (Fig. 39G) ..... *A. terania* sp. n.
46 Epigyne with scapus (Figs 20G, 28G, 31G, 43G) 47
– Epigyne without well-developed scapus (Figs 19G, 40G) 51
47 Scapus tongue-shaped (Figs 20G, 31G) 48
– Scapus of varying shape, not tongue-shaped (Fig. 28G) 49
48 Spermathecal heads sausage-shaped, not separated from stalks (Fig. 20H) ..... *A. gloriosa*
– Spermathecal head more globular, separated from stalks (Fig. 31H) ..... *A. mckayi*
49 Scapus broadly w-shaped (Fig. 28G) ..... *A. lineata*
– Scapus inverted T-shaped (Figs 42G, 43G) 50
50 Spermathecal stalks long and convoluted, heads connected medially (Fig. 43H) ..... *A. victoriensis*
– Spermathecal heads connected to stalks laterally (Fig. 42H) ..... *A. ulrichi*
51 Spermathecal heads triangular or ellipsoid (Fig. 40H) ..... *A. triangularis*
– Spermathecal heads globular (Figs 5H, 19H, 35H) 52
52 Spermathecal heads at least 3 x diameter apart (Fig. 19H) ..... *A. flavimana*
– Spermathecal heads 1diameter or less apart (Figs 5H, 7H, 24G, 32H, 33H, 35H,) 53
53 Spermathecal heads 1 diameter (Figs 5H, 24G, 35H) 54
– Spermathecal heads ½ diameter or less apart (Figs 7H, 32H, 33H) 56
54 Stalks short, connected to spermathecal heads posteriorly (Fig. 5H) ..... *A. alta*
– Stalks long, connected to spermathecal heads laterally (Figs 24H, 35H) 55
55 Epigyne posterior tips massive, strongly sclerotized (Fig. 35G) ..... *A. quadrata*
– Epigyne posterior tips less sclerotized (Fig. 24G) ..... *A. helensmithae* sp. n.
56 Atrium semicircular (Fig. 32G) ..... *A. mungo* sp. n.
– Atrium different (Figs 7G, 33G) 57
57 Atrium bell-shaped (Fig. 33G) ..... *A. munmorah* sp. n.
– Atrium obscure (Fig. 7G) ..... *A. beaury* sp. n.

Artoria albopilata (Urquhart, 1893)

Figs 3A–H, 4, 46F

White-haired Forest Runner

Lycosa albo-pilata Urquhart, 1893: 123–125.- Rainbow 1911: 1911.

Lycosa albopilata, Urquhart.- Roewer 1955: 271; Bonnet 1957: 2632; McKay 1973: 378; McKay 1985: 74.

Artoria albopilata (Urquhart).- Framenau 2005: 266–272, figs 1A–E, 2.

Material examined. Syntypes male and female of *Lycosa albo-pilata* Urquhart, 1893, no exact locality given [Tasmania, AUSTRALIA]. As many other Urquhart types, considered lost (Court and Forster 1988; Forster 1967). Not examined.

Other material examined. 588 males, 128 females and 45 juveniles in 152 records (146 NSW, 5 ACT). **AUSTRALIA**: **Australian Capital Territory:** 8 males, 1 female, Blundells Creek, 3 km E of Piccadilly Circus, 35°22’S, 148°50’E (ANIC); 7 males, Tidbinbilla Nature Reserve, 35°28’S, 148°52’E (AM KS13830); 7 males, 1 female, same locality (AM KS13873, KS86420). **New South Wales**: 1 female, Badja State Forest, Badja Fire Trail, 36°07’30”S, 149°31’37”E (AM KS64405); 1 male, Badja State Forest, Peters Road, 36°08’52”S, 149°32’09”E (AM KS64401); 1 male, Badja State Forest, Pollys Gully Road, 36°06’39”S, 149°28’26”E

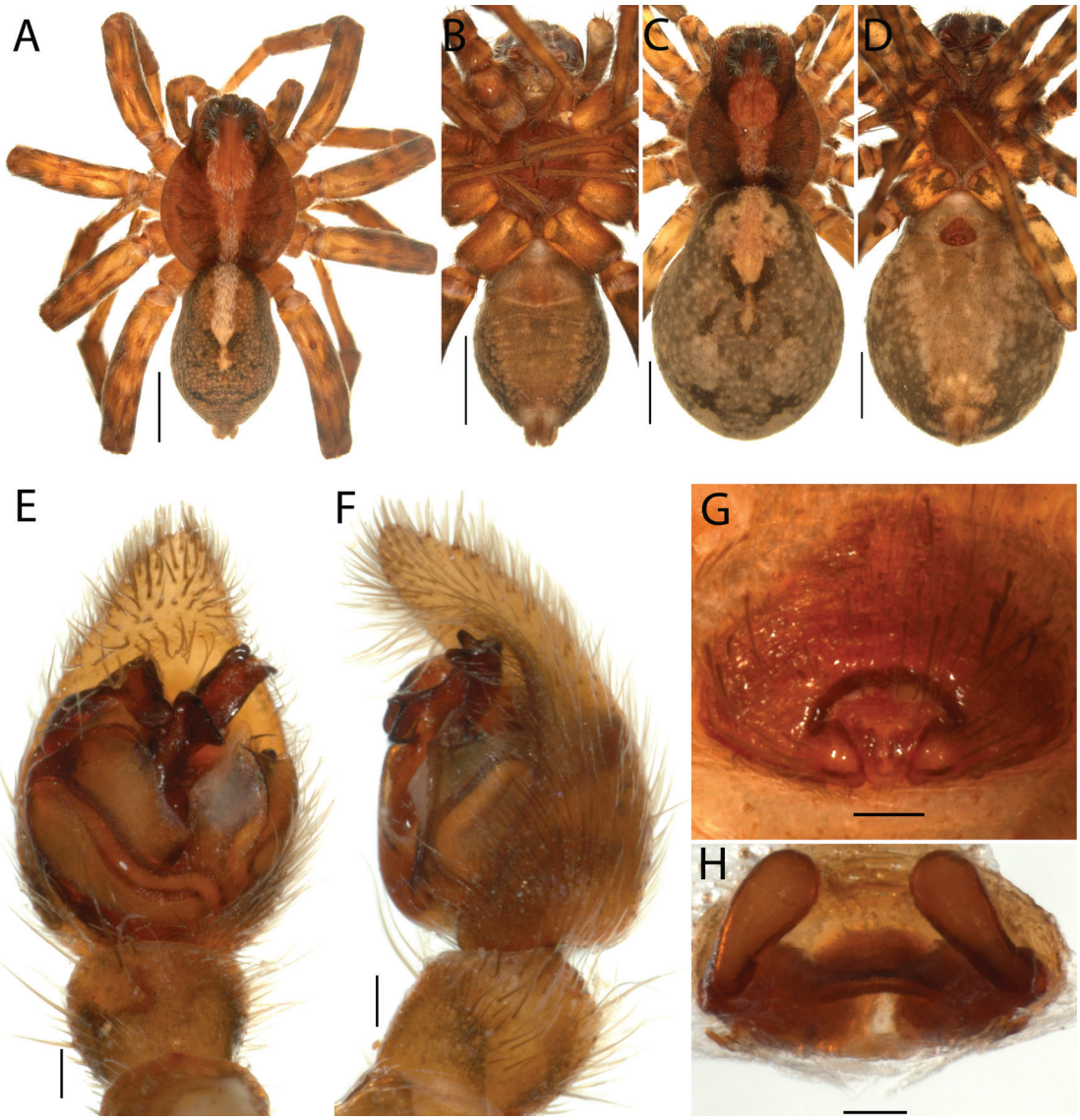

Figure 3. *Artoria albopilata* (Urquhart, 1893) male, female (AM KS116121): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

(AM KS64394); 4 females, Badja State Forest, Rocky Range Fire Trail, 36°03'21"S, 149°28'29"E (AM KS64407); 1 male, Badja State Forest, Tuross River Road, 36°12'31"S, 149°30'07"E (AM KS64402); 1 male, Badja State Forest, Wiola Creek Fire Trail, 36°05'24"S, 149°34'51"E (AM KS86409); 4 females, 2 juv., Beaury State Forest, SW end of Rock Waterhole Road, 28°33'S, 152°19'E (AM KS36135); Beaury State Forest, 1 female, SW end of Rocky Waterhole Road, 28°33'32"S, 152°19'30"E (AM KS128552); 2 males, Beaury State Forest, Tooloom Scrub, 28°35'S, 152°22'E (AM KS51276, KS50956); 96 males, 44 females, 21 juv., Bondi State Forest, 37°08'S, 149°09'E (AM KS11002, KS11010, KS11024, KS11033, KS11038, KS11045, KS11067, KS11127, KS11138, KS11157, KS11162, KS11174, KS11191, KS11195, KS11207, KS11219, KS11252, KS11333, KS11364, KS11370, KS12046, KS12061, KS12066, KS12084, KS12095, KS12110, KS12114, KS12123, KS12128, KS12140, KS12153, KS12158, KS12198, KS12215, KS45437–8, KS69706, KS70220, KS71596, KS71691, KS71696, KS71755, KS71783, KS72733, KS72754, KS72758, KS72773); 221 males, 30 females, 23 juv., Bondi State Forest, Woodlot 1, 37°08'S, 149°09'E (AM KS11334, KS11406, KS11424, KS11440, KS11478–9, KS11489, KS11526, KS11531, KS11549, KS11559, KS11576, KS11587, KS11597, KS11610, KS11622, KS11636, KS11661, KS11709, KS11720, KS11742, KS11752, KS11761, KS11772, KS11784, KS11799, KS11802, KS11807, KS11814, KS11824, KS11833, KS11842, KS11856, KS11864, KS11878, KS11892, KS11903, KS11914, KS11999, KS12007, KS12025, KS15188, KS15192, KS15201–2, KS18064–5, KS72747); 24 males, 15 females, Bondi State Forest, Woodlot 2, 37°07'S, 149°08'E (AM KS116628, KS69145, KS69154, KS69169, KS70203, KS70268, KS116066, KS116082,

KS116092, KS116108, KS116282, KS116287, KS116319, KS116300, KS116364); 100 males, 9 females, Bondi State Forest, Woodlot 3, 37°08'S, 149°09'E (AM KS116115, KS116121, KS116130, KS116141, KS116147, KS116152, KS116158, KS116166, KS116616, KS128553); 1 female, Boonoo State Forest, Boonoo Forest Drive, 1.8 km from Mt Lindesay Hwy, 28°56'S, 152°06'E (AM KS37001); 7 males, Cherry Tree North State Forest, 28°58'S, 152°15'E (AM KS63740, KS86191); 109 males, 8 females, Coolangubra State Forest, near Waratah Creek, 37°01'S, 149°23'E (AM KS79631–2, KS83683); 2 females, Kangaroo Creek State Forest, 1.5 km along Burns Road from junction with Kangaroo Creek Road, 30°04'S, 152°52'E (AM KS39730); 1 female, Kosciusko National Park, Bogong Creek and Alpine Way, 36°12'S, 148°19'E (AM KS45823); 1 female, 2 juv., Marengo State Forest, Big Bull Creek, 2.7 km NE of Foamy Creek Road, 30°07'30"S, 152°25'51"E (AM KS84062); 1 female, Mt Keira Fauna Reserve, Scout Camp, 34°24'S, 150°51'E (AM KS2213); 1 male, Oxley Wild Rivers National Park, East Kunderang Track, 30°48'25"S, 152°07'09"E (AM KS124362); 1 male, Shooters Hill, 33°54'S, 149°52'E (AM KS45150); 1 female, Spirabo State Forest, 0.5 km N three-way intersection, near Bull Creek, 29°18'S, 152°06'E (AM KS36981); 3 females, Styx River State Forest, bottom end of Cliffs trail, ca. 1.3 km from Oxley Road, 30°33'54"S, 152°20'50"E (AM KS35651); 1 male, Tallaganda State Forest, Rocky Pic Road, 35°36'47"S, 149°29'52"E (AM KS68644); 1 female, Tallaganda State Forest, Rocky Pic Road, 35°37'08"S, 149°30'17"E (AM KS64406); 1 female, Tallaganda State Forest, Rocky Pic Road, 35°36'46"S, 149°29'52"E (AM KS64404); 1 female, Wadbilliga National Park, Bumberry Creek Fire Trail, 36°14'20"S, 149°33'36"E (AM KS68641).

Diagnosis. *Artoria albopilata* is most similar to *A. gloriosa*, a species endemic to Lord Howe Island. Males differ in the shape of the tegular apophysis, which ends in three lobes in *A. albopilata* (Fig. 3E) and two tips in *A. gloriosa* (Fig. 20E). The tip of the embolus is sharp in *A. albopilata*, but broad and blunt in *A. gloriosa*. Females differ in the shape of the epigyne, in particular the anterior border, which is semicircular in *A. albopilata*, but undulating in *A. gloriosa*. The median septum fills the atrium in *A. albopilata*, but is truncated anteriorly in *A. gloriosa*.

Description. *Artoria albopilata* has been described in detail (Framenau 2005). A diagnosis and diagnostic images (Figs 3A–H, 46F) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria albopilata* is a forest species occurring in leaf litter. In NSW and the ACT, it has been found in open to closed dry to wet sclerophyll forests, with one record from a Hoop Pine plantation.

Mature males and females appear in spring in October with the highest number of records in November. There is a much smaller peak around March. A single female with eggsac was found in January. Mature spiders can be found until May. There are also few records of mature spiders from July.

Distribution. In NSW and ACT *A. albopilata* is particularly found east of the Great Dividing Range (Fig. 4). It has also been found in south-eastern Queensland, south-eastern Victoria, southern South Australia (incl. Kangaroo Island) and Tasmania (Framenau 2005).

Artoria alta Framenau, 2004

Figs 4, 5A–H, 46L

Alpine Forest Runner

Artoria alta Framenau, 2004: 28–30, Figs 1A–D, 2.

Material examined. Holotype male, Kosciuszko National Park, near Smiggins Hole (36°24'S, 148°26"E, New South Wales, AUSTRALIA), 1,700 m alt., alpine moor, D. Bickel (AM KS4789). Paratype male, Kosciuszko National Park, Spencer Creek near Charlottes Pass (36°24'S, 148°21"E, New South Wales, AUSTRALIA), D. Bickel (AM KS45825) (all examined).

Other material examined. AUSTRALIA: New South Wales: 1 female, Kosciuszko National Park, Three Mile Dam, 35°53'S, 148°27"E (AM KS27957).

Diagnosis. The tegular apophysis in male *A. alta* has a distinctive shape with a terminal part that resembles, in ventral view of the pedipalp, a bicycle seat (Fig. 5E). The female here associated with *A. alta* has a distinct waved anterior border of the epigyne and two posterior dark lobes (Fig. 5G).

Description. The male of *A. alta* has been described in detail (Framenau 2004). A diagnosis and diagnostic images (Figs 5A–H, 46L) are provided here to facilitate identification. A putative female of the species (the only female of *Artoria* currently known from alpine habitats near the type locality), is illustrated here (Fig. 4), although conspecifity remains unclear. The body colouration of the female is much more distinct than that of the male and this female may represent a different species. We decided to include the female here as potential candidate of the female *A. alta* to have a public documentation of this morphotype.

Life history and habitat preferences. *Artoria alta* is known only from subalpine or alpine habitats in Kosciuszko National Park in New South Wales. Mature males and females have so far only been found in summer, between end of November and end of December.

Distribution. Known only from Kosciuszko National Park, NSW, in the Australian Alps (AUA) IBRA region (Fig.4).

Artoria barringtonensis sp. n.

http://zoobank.org/BC784190-7995-4487-AB93-97923EC26470

Figs 2B, 4, 6A–D, 47A

Barrington Tops Forest Runner

Material examined. Holotype male, 180 m off Barrington Tops Forest Road, Barrington Tops National Park

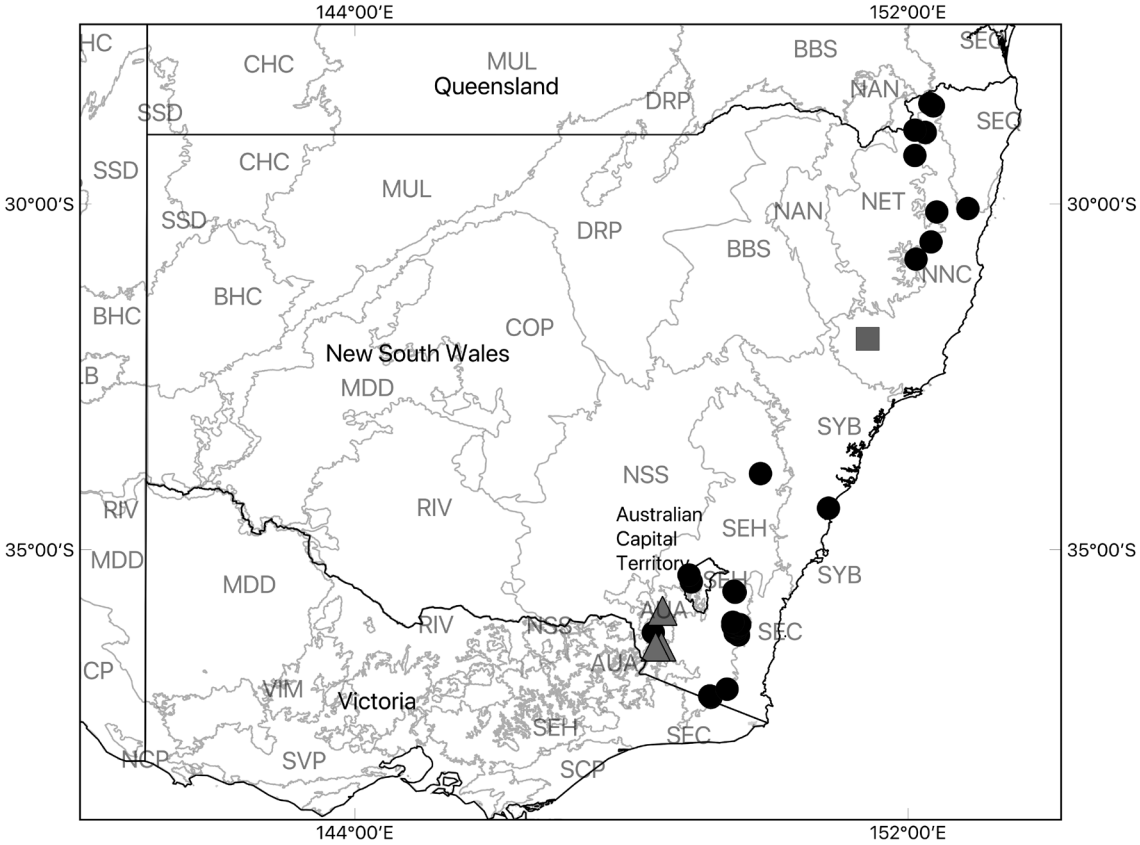

Figure 4. Distribution records of *Artoria albopilata* (Urquhart, 1893) (full circles), *A. alta* Framenau, 2004 (grey triangles) and *A. barringtonensis* sp. n. (grey square) in NSW and ACT. IBRA bioregions with spider records: AUA – Australian Alps; NET – New England Tablelands; NNC – NSW North Coast; SEQ – South East Queensland; SHE – South Eastern Highlands; SYB – Sydney Basin.

[31°57'S, 151°25'E, New South Wales, AUSTRALIA], 11–21 Jan 2012, J.R. Gollan, M.A. Ashcroft, pitfall trap, edge of upland swamp (AM KS122794).

Other material examined. Known only from type specimen.

Etymology. The specific name is an adjective in apposition derived from the type locality, Barrington Tops National Park.

Diagnosis. The tegular apophysis in males of *A. barringtonensis* sp. n. is distinct amongst the known species of the genus due to the presence of a row of apical teeth, which are visible in lateral view (Fig. 6D).

Description. Male (based on holotype, AM KS122794). Total length 3.6.

Prosoma. Length 2.3, width 1.5; carapace yellow-brown, dusted with grey and with an indistinct dark radial pattern; lateral margin and central band pale yellow, broader in cephalic area (Fig. 6A); sternum dark brown (Fig. 6B).

Eyes (Fig. 2B). Diameter of AME: 0.07; ALE: 0.10; PME: 0.25; PLE: 0.18.

Anterior eye row. Straight, distance between AME/AME at least twice of AME/ALE.

Chelicerae. Medium brown.

Labium. Dark brown, with lighter anterior rim (Fig. 6B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 6B).

Legs. Femora and tibiae of leg I very dark; other legs yellow brown, with no annulations (Fig. 6A).

Opisthosoma. Length 1.6, width 1.3; dark grey with light yellow-brown anterior cardiac mark, reaching end of opisthosoma and light irregular pattern (Fig. 6A). Venter uniformly brownish-grey (Fig. 6B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with 4–5 macrosetae (Fig. 6C, D), dorsal scopula patch present; tegular apophysis long, rectangular distal part bulged, basally as wide as distally, retrolateral tip slightly hooked and not reaching margin of cymbium (Fig. 6C); palea about as long as wide; basoembolic apophysis short, broadly rounded; embolus widely v-shaped; terminal apophysis broad, tip long, triangular (Fig. 47A).

Female unknown.

Life history and habitat preferences. The single male of this species was found at the edge of an upland swamp in summer (January).

Distribution. *Artoria barringtonensis* sp. n. is known only from its type locality, the Barrington Tops National Park in the south-eastern NSW North Coast (NNC) IBRA region (Fig. 4).

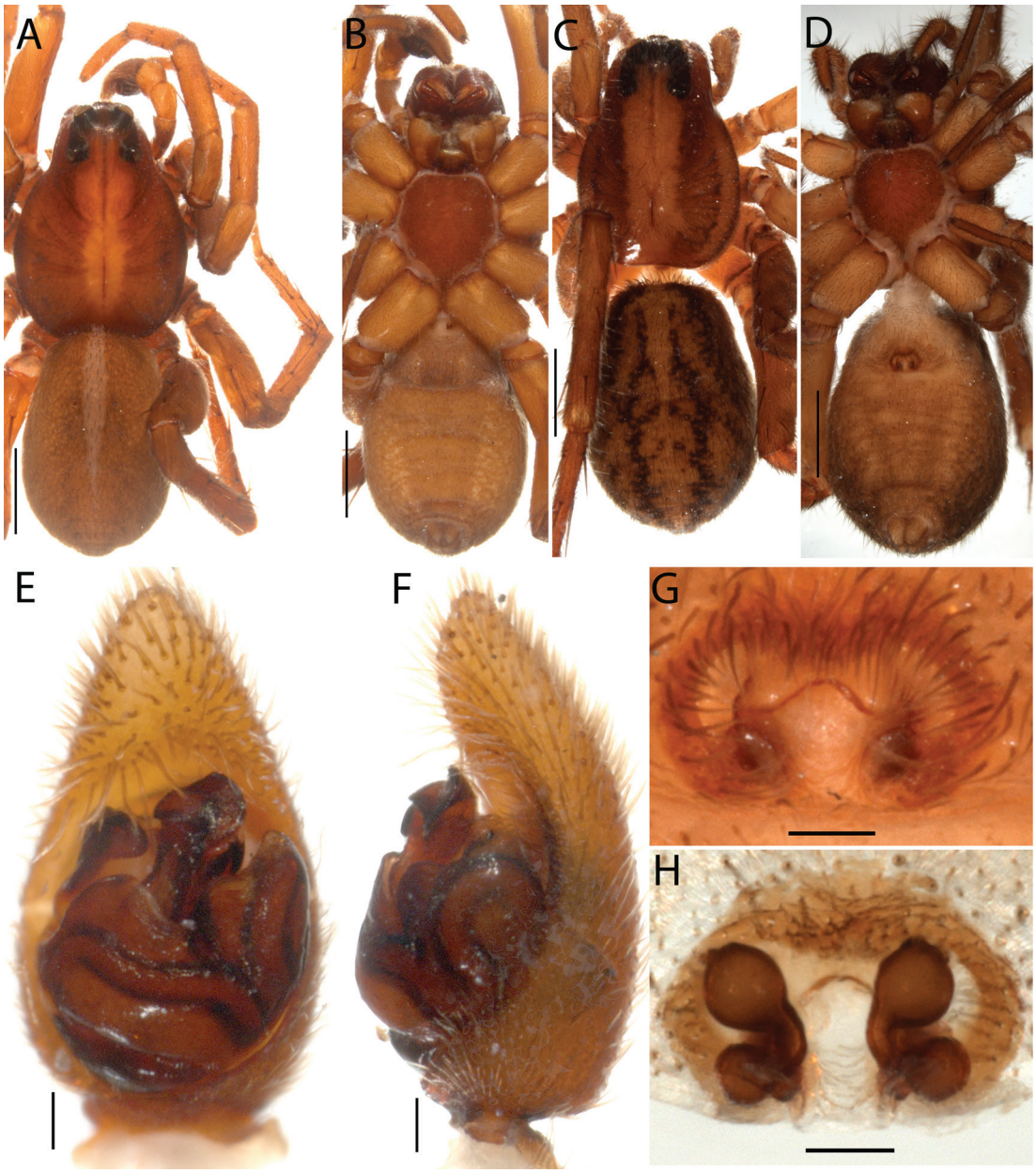

Figure 5. *Artoria alta* (Framenau, 2004) male (AM KS44789), female (AM KS 27957): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

***Artoria beaury* sp. n.**

http://zoobank.org/2F184E2E-D902-453A-AE01-8FDD1D646426

Figs 7A–H, 8, 47B

Beaury Forest Runner

Material examined. Holotype male, Beaury State Forest, Tooloom Scrub [28°35'S, 152°22'E, New South Wales, AUSTRALIA], sheltered ridge, 600–900 m alt., 12 December 1988, H. Smith et al., pitfall trap (AM KS127757). Paratypes: 1 female, 4 males, same data as holotype (AM KS51053); 4 males, 3 female, Yabbra Scrub State Forest, Yabbra Scrub (28°38'S, 152°30'E, New South Wales, AUSTRALIA), swamp/dry sclerophyll, major creek, sheltered slope, 14 December 1988, coll. Smith, Hines, Pugh, Webber, pitfall trap, Focal Peak Survey UNE, Y10, 300 m alt. (AM KS86423); 1 male, 1 female, same data (ZMH A0002166).

Other material examined. 92 males, 48 females and 2 juveniles in 58 records (all NSW). **AUSTRALIA: New South Wales:** 4 males, Acacia Plateau, Wilsons Peak area, Koreelah State Forest, 28°16'S, 152°27'E (AM KS52089, KS57759, KS57761); 27 males, 2 females, Bagawa Creek State Forest, 3 km NW of Caledonian Knob, 30°08'44"S, 152°55'47"E (AM KS61044, KS63390); 3 females, Beaury State Forest, northwards along Wallaby Creek Road, 28°24'47"S, 152°27'39"E (AM KS36144); 4 females, 2 juv., Beaury State Forest, SW end of Rock Waterhole Road, 28°33'S, 152°19'E

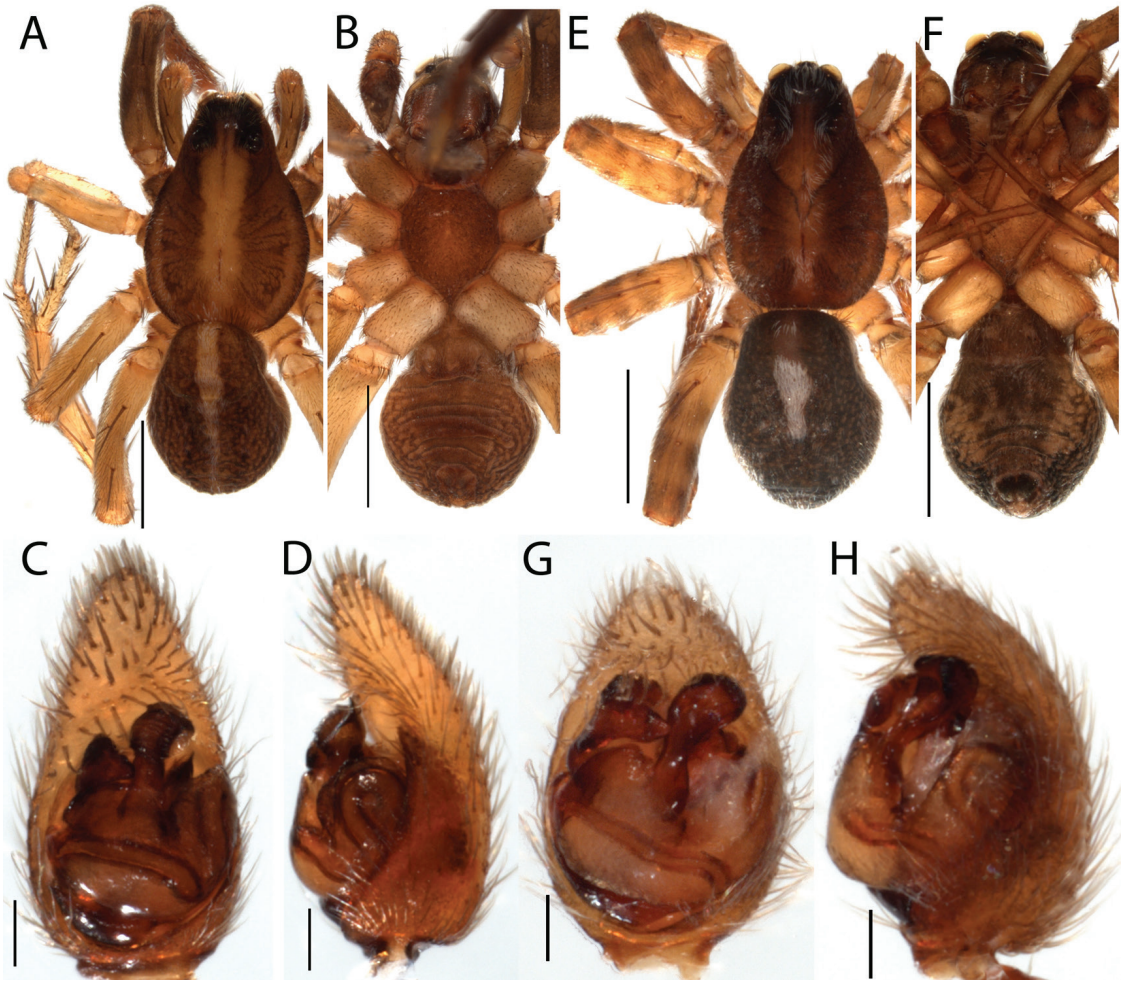

Figure 6. **A–D**, *Artoria barringtonensis* sp. n., male holotype (AM KS122794), **E–H**, *Artoria bondi* sp. n., male holotype (AM KS128073): **A**, habitus, dorsal view; **B**, habitus, ventral view; **C**, pedipalp, ventral view; **D**, pedipalp, retrolateral view; **E**, habitus, dorsal view; **F**, habitus, ventral view; **G**, pedipalp, ventral view; **H**, pedipalp, retrolateral view. Scale bars: habitus 1.0 mm; pedipalp 0.1 mm

(AM KS36135); 16 male, Beaury State Forest, Tooloom Scrub, 28°35'S, 152°22'E (AM KS50959, KS51277, KS51279, KS51294, KS51632, KS63738–9); 1 female, Boonoo State Forest, junction of Woolool Wooloolni and Basket Swamp Roads, 28°55'49"S, 152°08'21"E (AM KS37007); 2 females, Boonoo State Forest, Timbarra Trig, 28°56'41"S, 152°08'31"E (AM KS37009); 1 female, Boorook State Forest, 300 m NW of Gilgurry Mountain, 28°47'23"S, 152°10'56"E (AM KS36990); 4 females, Boorook State Forest, Boonoo Boonoo River, Saddle upstream from tributary of Boonoo Boonoo River below and E of Boonoo Boonoo Falls, 28°48'25"S, 152°11'03"E (AM KS36989); 2 females, Boundary Creek State Forest, Grahams Gully downstream of Boundary Creek Road, 29°58'36"S, 152°34'48"E (AM KS39703); 4 males, Cambridge Plateau, Richmond Range State Forest, 28°47'S, 152°45'E (AM KS49716, KS57690); 2 females, Carrai State Forest, Fife Fire Trail, 1.6 km NE of Fifes Knob Road, 30°55'21"S, 153°23'27"E (AM KS39990); 1 male, Cherry Tree North State Forest, 28°58'S, 152°15'E (AM KS49842); 1 male, 1 female, Coldwater Creek and Bushmans Range Roads junction, 1.5 km E, 30°11'54"S, 152°56'54"E (AM KS70101); 3 females, Conglomerate State Forest, Old Growth Road, 2.85 km from E end and 1.15 km from W end, off Sherwood Road, 30°06'49"S, 153°03'51"E (AM KS39705); 2 males, Dome Mountain, Richmond Range and Yabbra State Forest, 28°28'S, 152°43'E (AM KS53792, KS57749); 1 female, Dorrigo National Park, off Dorrigo-Bellingen Road, 20 km from Bellingen, 500 m S Newell Falls, 30°23'55"S, 152°44'56"E (AM KS35662); 1 female, Huonbrook Upper Cooper's Creek, 28°42'S, 153°24'E (AM KS86235); 1 female, Kangaroo River State Forest, 200 m E of a point 550 m along Burns Road, 30°04'36"S, 152°52'05"E (AM KS39704); 11 males, 1 female, Koreelah State Forest, Acacia Plateau Wilsons Peak area, 28°16'S, 152°27'E (AM KS39399, KS43857, KS45237, KS49198, KS51312); 1 female, Leasehold land, 3.45 km along Wheatly Creek access Road on Camp Creek Road, 28°47'16"S, 152°18'56"E (AM KS37024); 4 females, Mt Belmore State Forest, 29°08'55"S, 152°45'52"E (AM KS88471–3); 1 female, Myall Lakes National Park, 32°37'56"S, 152°12'27"E (AM KS61939); 2 females, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS128881); 2 females, Oakes State Forest, Horse-

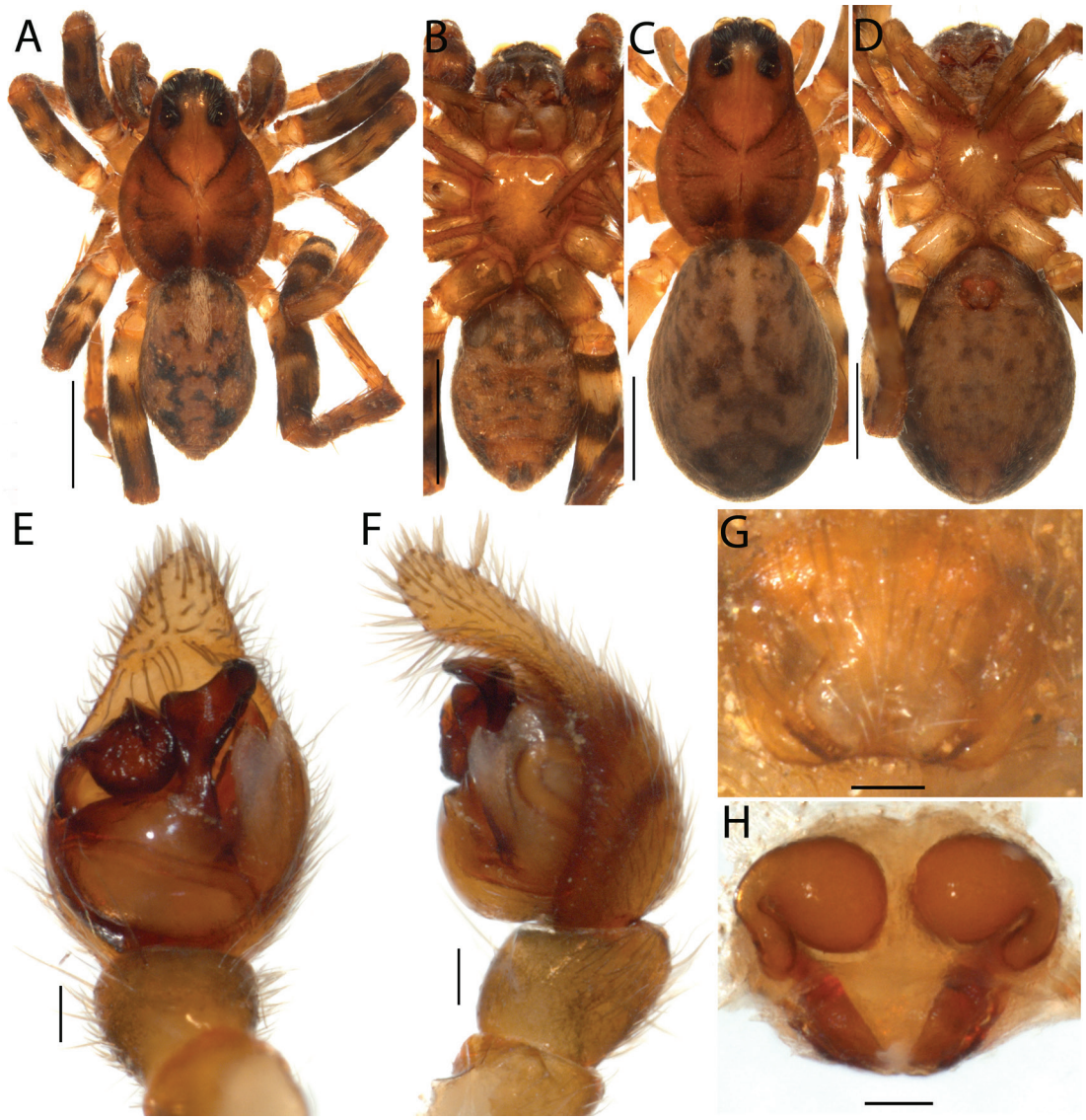

Figure 7. *Artoria beaury* sp. n., male holotype (AM KS127757), female paratype (AM KS51053): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

shoe Road, 1.2 km S of Killiekrankie Mt, 30°33’10”S, 152°32’15”E (AM KS61548); 1 female, Oakes State Forest, Sirius Road, 2 km from junction with Horseshoe Road, 30°29’19”S, 152°35’27”E (AM KS61583); 3 males, Richmond Range State Forest, Cambridge Plateau, 28°47’S, 152°45’E (AM KS63735); 1 male, Roses Creek State Forest, Scotchmans Peak, NE slope, 30°28’35”S, 152°39’54”E (AM KS62093); 1 female, Spirabo State Forest, Spirabo Fire Trail, near Five Bull Creek, 29°18’36”S, 152°06’25”E (AM KS36979); 3 females, Washpool National Park, Washpool Forest Way, 29°24’47”S, 152°17’00”E (AM KS37039); 1 female, Washpool Sate Forest, past Coombadjah to along Moogem Road, 29°16’S, 152°22’E (AM KS9364); 18 males, 5 females, Yabbra Scrub State Forest, Yabbra Scrub, 28°38’S, 152°30’E (AM KS44659, KS44820, KS44822, KS51046, KS51067, KS86423, KS128873).

Etymology. The specific epithet is a noun in apposition and refers to the type locality, Beaury State Forest.

Diagnosis. Pedipalps of male *Artoria beaury* sp. n. are most similar to *Artoria helensmithae* sp. n.; however, the basoembolic apophysis is broadly rounded (Fig. 47B) and not tapering as in *Artoria helensmithae* sp. n. (Fig. 47K). Legs I are darker than all other legs in male *Artoria beaury* sp. n. (Fig. 7A), but less so in *Artoria helensmithae* sp. n. (Fig. 24A). Female *Artoria beaury* sp. n. are very similar to *Artoria helensmithae* sp. n. whose posterior tips of the epigyne are further apart and less sclerotized (Fig. 7G *vs* Fig. 24G)

Description. Male (based on holotype, AM KS127757). Total length 3.9.

Prosoma. Length 2.1, width 1.5; carapace light reddish-brown with dark radial pattern and black V-shaped pattern between cephalic and thoracic region; indistinct and irregular broad lighter marginal band (Fig. 7A); sternum light brown, dusted dark grey (Fig. 7B).

Eyes. Diameter of AME: 0.08; ALE: 0.05; PME: 0.23; PLE: 0.18.

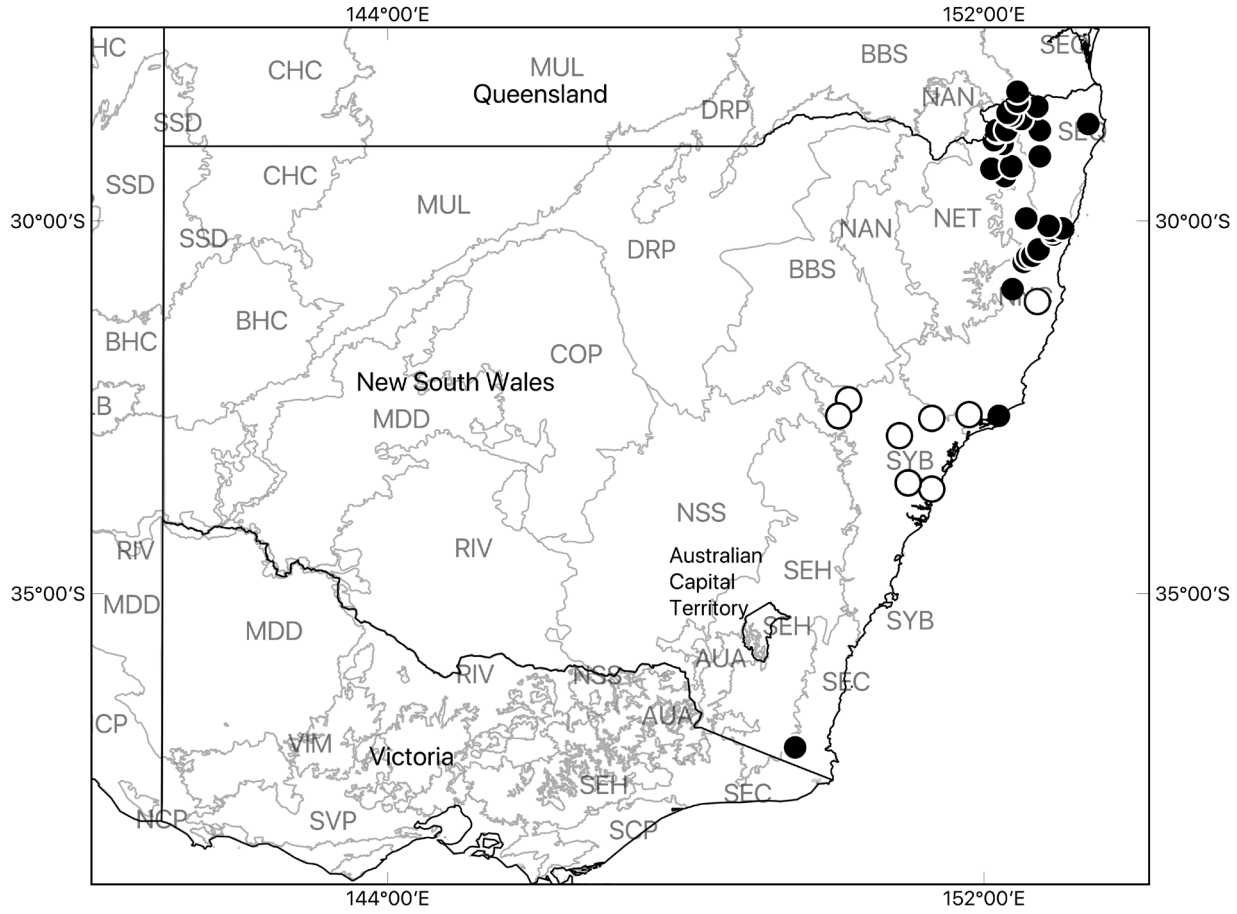

Figure 8. Distribution records of *Artoria beaury* sp. n. (full circles) and *A. belfordensis* sp. n. (open circles) in NSW. IBRA bioregions with spider records: NET – New England Tablelands; NNC – NSW North Coast; SEC – South East Coastal; SEQ – South East Queensland; SYB – Sydney Basin.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Dark brown, darker apically.

Labium. Dark brown, with lighter anterior rim (Fig. 7B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 7B).

Legs. Femora and tibiae of leg I very dark to almost black; other legs brown, femora and tibia with darker annulations, particularly ventrally; tarsi and metatarsi lighter reddish-brown (Fig. 7A).

Opisthosoma. Length 1.8, width 1.1; cinnamon-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern mainly in posterior half (Fig. 7A). Venter cinnamon with darker pattern (Fig. 7B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; Cymbium tip with 4–5 macrosetae (Fig. 7E,F); dorsal scopula patch absent; tegular apophysis distally widely scooped, basally narrowed to 1/3, retrolateral tip pointed and reaching margin of cymbium (Fig. 7E); palea about 1 1/2 as long as wide; basoembolic apophysis about as long as broad, broadly rounded; embolus broad, widely semicircular; terminal apophysis broad, tip triangular (Fig. 47B).

Female (based on paratype, AM KS51053).

Total length 5.0.

Prosoma. Length 2.4, width 1.6; carapace and sternum colouration as male (Fig. 7C, D).

Eyes. Diameter of AME 0.06, ALE 0.05, PME 0.25, PLE 0.16.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae, labium, pedipalp coxae, legs and *opisthosoma.* Opisthosoma length 2.6, width 1.9; otherwise as male, but legs I not darker and opisthosoma pattern more obscure (Fig. 7D).

Epigyne about as long as wide, poorly sclerotized at posterior tips, atrium lighter (Fig. 7G); spermathecal heads globular about 1/5 of diameter apart, spermathecal stalks attached laterally and centrally bent (Fig. 7H).

Life history and habitat preferences. *Artoria beaury* sp. n. is a forest species most commonly collected in litter from dry sclerophyll and subtropical forests or rainforests. Records also include Bunya and Hoop Pine plantations.

Mature males have only been found in November and December, mature females from November to May, with peaks in December and April. A single female with egg-sac was found in March.

Distribution. In NSW, *Artoria beaury* sp. n. occurs in the north-east, principally in the NSW North Coast (NNC), New England Tablelands (NET) and South Eastern Queensland (SEQ) IBRA regions with a single isolated record also from the South East Coastal (SEC) region (Fig. 8). *Artoria beaury* sp. n. has also been found in south-eastern Queensland (V.W. Framenau, unpublished data).

Artoria belfordensis sp. n.

http://zoobank.org/8B0092B0-56B6-4AA8-BD11-BC63FB3CD772
Figs 2D, 8, 9A–H, 47C
Belford Forest Runner

Material examined. Holotype male, Belford National Park, 60 m from Kirkton Road and 2.5 km east of Belford (32°39'S, 151°18'E, New South Wales, AUSTRALIA), 17–27 June 2012, J.R. Gollan, M.A. Ashcroft, pitfall trap, canopy of trees but moderate condition, (AM KS127759). Paratypes: 5 males, same data as holotype (AM KS122425); 2 males, 1 female, Maroota State Forest (33°31'S, 150°59'E, New South Wales, AUSTRALIA), 26 October 1979, G.A. Webb, NSW States Forest Survey H/8 (AM KS73425).

Other material examined. 18 males 13 records (all NSW). **AUSTRALIA : New South Wales:** 1 male, Currawong, 33°36'S, 151°18'E (AM KS86426); 3 males, Ferntree Gully Reserve, approx. 170 m from Bylong Valley Way and 4 km SW of Ginghi, 32°37'20"S, 150°03'37"E (AM KS122454); 1 male, Goulburn River National Park, approx. 120 m from Bylong Valley Way and 6 km E of Bylong, 32°24'18"S, 150°11'10"E (AM KS122446); 13 males, Maroota State Forest, 33°31'S, 150°59'E (AM KS73313, KS73327, KS73338, KS73384, KS73388, KS73397, KS73407, KS73441, KS84096); 1 female, same locality (AM KS 73452); 1 female, Wallaroo State Forest, Flaggy Creek, 32°36'03"S, 151°48'07"E (AM KS39707); 1 female, Yengo National Park, approx. 90 m from Howes Trail Road, 32°53'32"S, 150°52'47"E (AM KS122319); Yesabah Caves, near Kempsey, 31°05'S, 152°43'E (AM KS84058).

Etymology. The specific name is an adjective in apposition derived from the type locality, Belford National Park.

Diagnosis. Males of *A. belfordensis* sp. n. differ from all other *Artoria* species, except *A. taeniifera*, by the base of the basoembolic apophysis, which is drawn out into an apical tip (Fig. 47C). It differs from *A. taeniifera* by the shape of the tegular apophysis, distinctly two-pronged in *A. taeniifera*, but three-lobed in *A. belfordensis* sp. n. There is some variation in this character, but also in the shape of the tegular apophysis within this species. Too little material is available to judge if this represents intra- or interspecific variation. We therefore consider this variation capable of occurring within one species. Females are most similar to females of *A. taeniifera* but differs in the shape of the atrium which is inverted U-shaped in *A. taeniifera* (Fig. 38G) and obscure in *A. belfordensis* (Fig. 9G).

Description. Male (based on holotype AM KS127759; palea AM KS122425).

Total length 4.3.

Prosoma. Length 2.5, width 1.8; carapace light yellow-brown with indistinct dark radial and black V-shaped pattern between cephalic and thoracic region; covered with dark setae centrally and marginally with a band of lighter setae (Fig. 9A); sternum medium brown, dusted dark grey (Fig. 9B).

Eyes (Fig. 2D). Diameter of AME: 0.09; ALE: 0.08; PME: 0.26; PLE: 0.21.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae. Dark brown darker apically.

Labium. Dark brown, with lighter anterior rim (Fig. 9B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 9B).

Legs. Yellow brown with darker annulations tibiae, metatarsi and tarsi darker, less annulated (Fig. 9A).

Opisthosoma. Length 1.8, width 1.3; yellow-brown with light yellow-brown anterior cardiac mark covered with white setae, and dark grey irregular pattern mainly in posterior half (Fig. 9A). Venter yellow-brown with darker pattern (Fig. 9A); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; Cymbium tip without macrosetae (Fig. 9E, F); dorsal scopula patch absent; tegular apophysis long, nearly rectangular distally slightly scooped, basally narrowed to 2/3, retrolateral tip pointed, not reaching margin of cymbium (Fig. 9E); basoembolic apophysis nearly twice as long as broad, broadly rectangular indented medially; embolus broad, widely semicircular; terminal apophysis broad, tip pointed (Fig. 47C).

Female (based on paratype, AM KS73425).

Total length 3.4.

Prosoma. Length 1.9, width 1.3; carapace and sternum colouration as male, although somewhat lighter (Fig. 9C, D).

Eyes. Diameter of AME 0.05, ALE 0.04, PME 0.19, PLE 0.16.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae, labium, pedipalp coxae, legs and *opisthosoma*. Opisthosoma length 1.9, width 1.2; otherwise as male, but legs I not darker and opisthosoma pattern more obscure (opisthosoma deflated due to preservation) (Fig. 9C, D).

Epigyne slightly wider than long, obscure, with heavily sclerotized posterior tips (Fig. 9G); spermathecal heads ovoid about 1/2 of diameter apart, spermathecal stalks attached postero-laterally and slightly S-shaped (Fig. 9H).

Life history and habitat preferences. *Artoria belfordensis* sp. n. was collected in undisturbed or moderately disturbed forest. Mature males were collected in June, October and November and the single female in October, indicating winter to spring maturity.

Distribution. This species is known from central eastern NSW, principally the Sydney Basin (SYB) and NSW North Coast (NNC) IBRA regions (Fig. 8).

Artoria berenice (L. Koch, 1877)

Figs 10C, D, G, H, 11 A–H, 12, 46H
Berenice's Forest Runner

Lycosa berenice L. Koch, 1877: 937–938, pl. 81, figs 3, 3A.- Rainbow 1911: 265; McKay 1985: 75.

Pardosa versicolor L. Koch, 1877: 966–968, pl. 84., fig. 4.- Rainbow 1911: 276; Roewer 1955: 185; McKay 1973: 378; McKay 1985: 85 (synonymy established in Framenau (2005)).

Lycosa naevia L. Koch, 1878: 978–979, pl. 85, figs 5, 5A (preoccupied by *Lycosa naevia* L. Koch, 1875; = *Pardosa naevia* (Koch 1875)).- Rainbow 1911: 270 (synonymy established in Framenau (2005)).

Lycosa ambrymiana Berland, 1938: 184–185, figs 153–156.- Roewer 1955: 271 (synonymy established in Framenau (2005)).

Tarentula naeviella (Roewer, 1951): 442 (replacement name for *Lycosa naevia* L. Koch, 1878).

Avicosa berenice (L. Koch).- Roewer 1955: 236.

Hogna naeviella (Roewer).- Roewer 1955: 253; Rack 1961: 38.

Lycosa naeviella (Roewer).- McKay 1973: 379; McKay 1985: 80.

Schizocosa berenice (L. Koch).- McKay 1973: 381.

Artoria versicolor (L. Koch).- Framenau 2002: 230–231; figs 27A–F, 28.

Artoria berenice (L. Koch).- Framenau 2005: 272–273, figs 3, 4.

Material examined. Holotype female of *Lycosa berenice* L. Koch. 1877, no locality given, Bradley Collection, considered lost (not examined). Syntypes of *Pardosa versicolor* L. Koch, 1877, unknown number of male and female specimens, Sydney (33°53'S, 151°13'E, New South Wales, AUSTRALIA), Bradley Collection, considered lost (not examined). Holotype female of *Lycosa naevia* L. Koch, 1878, Sydney, (33°53'S, 151°13'E, New South Wales, AUSTRALIA), Museum Godeffroy No. 14560 (ZSMH A0000051, Rack (1961)-catalogue 469 (examined). Holotype female of *Lycosa ambrymiana* Berland, 1938, Mont Marum, Ambrym (16°15'5S, 168°07'E, VANUATU), 9 January 1936, Aubert de la Rue, 900 m (MNHP) (not examined). Allotype male of *Lycosa ambrymiana* Berland, 1938, data as holotype (MNHP) (not examined).

Other material examined. 237 males, 239 females (1 with eggsac, 1 with spiderlings) and 27 juveniles in 152 records (all NSW). **AUSTRALIA** : **New South Wales:** 1 male, 4 km NE of Mount Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS98806); 1 female, same locality (AM KS98802) ; 1 female, Armidale Point Lookout, 30°29'S, 152°25'E (AM KS48847); 1 female, Badja State Forest, Wiola Creek Fire Trail, 36°05'24"S, 149°34'51"E (AM KS66806); 1 female, Ballengarra State Forest, 2 km S of Ballengarra Creek crossing on Greys Road, 31°14'48"S, 152°45'53"E (AM KS39781); 5 males, 1 female, Barren Grounds Nature Reserve, 14 km NW Jamberoo, Illawarra Escarpment, 34°40'28"S, 150°42'45"E (AM KS63093, KS63097, KS63099); 1 male, Barrington Tops National Park, 40 m off Barrington Tops Forest Road, 31°54'51"S, 151°29'54"E (AM KS123078); 1 male, Barrington Tops National Park, Gloucester Tops, gate on Kerripit Road, 32°03'43"S, 151°34'39"E (AM KS128554); 6 males, 2 females, Barrington Tops Reserve, Barrington Trail, 31°56'37"S, 151°26'53"E (AM KS102918); 2 males, 2 females, Barrington Tops State Forest, W of junction Thunderbolts Trail and Devils Hole Track, 31°54'56"S, 151°28'37"E (AM KS39782); 1 male, Barrington Tops State Forest, Tugalow Creek, Barrington Trail, E side of trail, 31°54'41"S, 151°26'39"E (AM KS39786); 1 female, Beaury State Forest, Rocky Waterholes Road, 28°32'49"S, 152°20'11"E (AM KS36158); 1 female, Bellinger River State Forest, NW of Thora, 30°25'03"S, 152°45'30"E (AM KS75350); 1 female, Ben Halls Gap State Forest, (AM KS89900); 2 females, Boorook State Forest, 1 km E of main road, 28°49'20"S, 152°11'14"E (AM KS36994); 2 females, Boorook State Forest, Boorook Creek Crossing, Colongan Road, 28°51'53"S, 152°11'46"E (AM KS37004); 4 males, Booti Booti National Park, 32°14'44"S, 152°32'33"E (AM KS61857–8, KS61863, KS61901); 1 male, 2 females, Botany, 33°57'S, 151°12'E (AM KS4139, KS66168, KS84085); 3 females, Boundary Creek State Forest, 1.9 km along Sheas Nob Road from Boundary Road, 29°59'25"S, 152°34'33"E (AM KS39773); 1 male, Boundary Creek State Forest, 100 m S of junction of Dills Road and Boundary Creek Road, 29°58'14"S, 152°36'51"E (AM KS39775); 7 females, Boundary Creek State Forest, 1 km N along Joebill Road from Shannon Creek Road, 29°56'13"S, 152°33'12"E (AM KS39772); 1 female, Bulga State Forest, 600 m N of Homewoods Road, 2.8 km W of Knodingbul Road, 31°37'03"S, 152°07'44"E (AM KS40745); 1 male, Bungawalbin State Forest, 29°09'48"S, 153°07'39"E (AM KS88482); 1 female, Bungawalbin State Forest, 29°08'04"S, 153°08'01"E (AM KS88456); 1 male, Bungonia, 34°48'S, 150°01'E (WAM T55469); 1 male, Bungonia Caves area near Information Centre, 34°48'02"S, 150°00'57"E (AM KS85150); 1 female, ridge between Camp Creek and Stydgy Creek, 28°46'18"S, 152°18'08"E (AM KS37016); 3 males, Carrai State Forest, 31°00'19"S, 152°16'24"E (AM KS120314); 2 females, 1 juv., Carrai State Forest, Fifes Knob Road, 2 km from Fifes Fire Trail, 30°54'55"S, 152°22'08"E (AM KS39994); 6 females, Carrai State Forest, Fifes Knob Road, 4 km from Fifes Fire Trail, 30°54'03"S, 152°22'12"E (AM KS39993); 1 female, Conglomerat State Forest, 1.7 km NW along Murphy's Road from Madmans Creek bridge, on S side of ridge, 30°03'57"S, 153°05'58"E (AM KS39774); 2 males, Coolah Tops National Park, Breeza Lookout, 31°49'17"S, 150°11'28"E (AM KS75150, KS75413); 3 male, 1 female, Coolah Tops National Park, Bald Hill Track., 2.5 km from The Forest Road, 31°45'02"S, 150°01'26"E (AM KS75080, KS75089); 1 female, Coolah Tops National Park, The Forest Road, 0.3km E of Hildegard Road, 31°43'59"S, 150°02'04"E (AM KS75426); 3 male, Coolangubra State Forest, Gawcool, 37°00'S, 149°22'E (collno5 KS73186, KS73191); 3 males, Devils Pulpit State Forest, 29°15'45"S, 153°13'46"E (collno5 KS88488, KS88490–1); 1 female, Doubleduke State Forest, junction of Range Road and Lockleys Road, 29°14'04"S, 153°11'10"E (AM KS39769); 1 male, Doubleduke State Forest, Jackybulbin Flat Road, 0.3 km S of junction with Range Road, 29°14'17"S, 153°9'45"E (AM KS39770); 2 males, East Boyd State Forest, Anteater Road, 37°12'S,

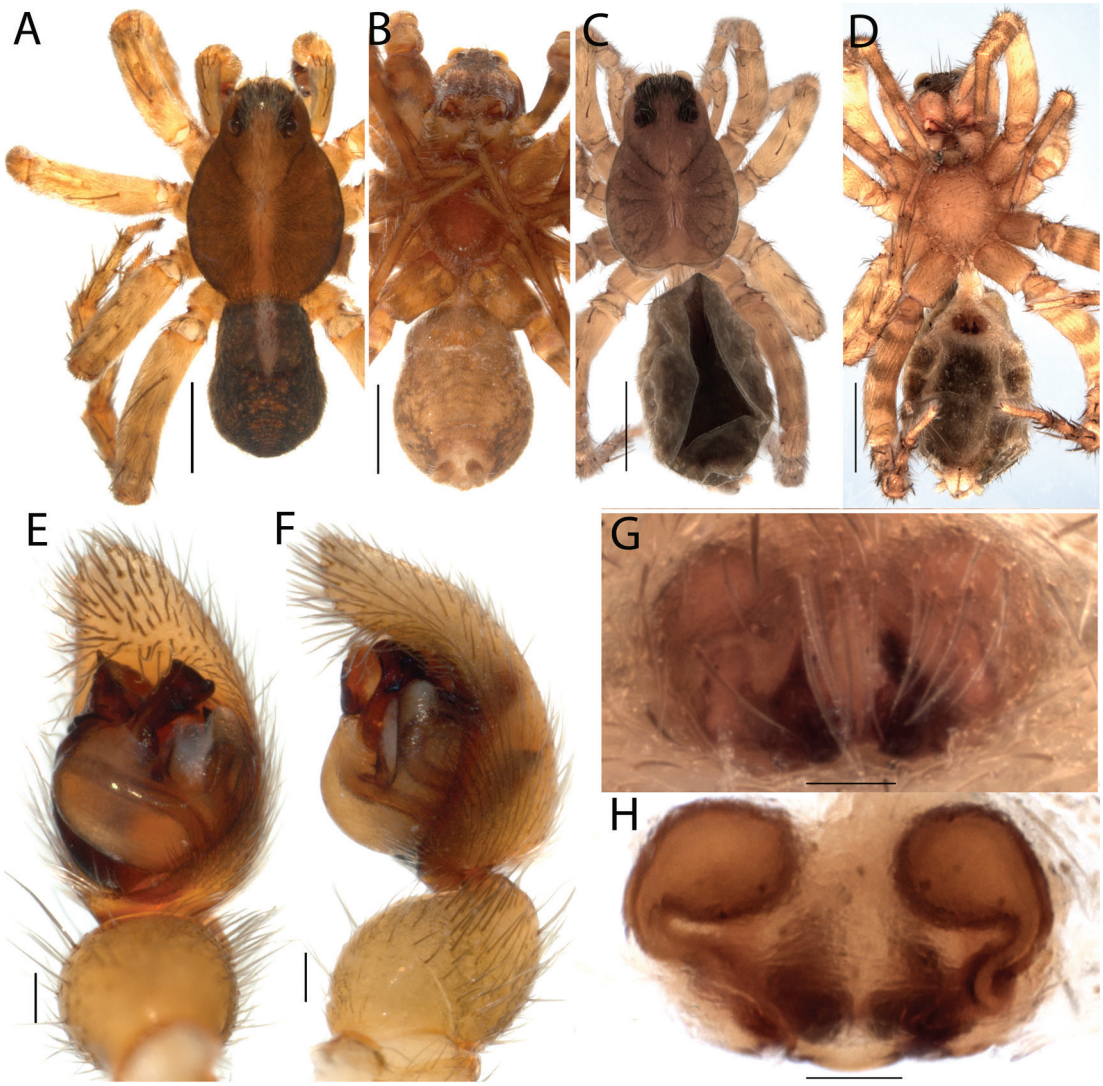

Figure 9. *Artoria belfordensis* sp. n., male holotype (AM KS127759), female paratype (AM KS73425): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

149°45’E (AM KS116390, KS116411); 1 female, Enfield State Forest, 31°57’9”S, 151°51’40”E (AM KS74567);1 female, Enfield State Forest, Dodds Fire Trail, 2 km from Enfield Road on Scrubby Creek, 31°23’57”S, 151°52’39”E (AM KS39779); 2 females, Enfield State Forest, Double Dumps fire trail, 700 m off Daisy Patch Road, 31°20’49”S, 151°54’01”E (AM KS39778); 2 females, Enfield State Forest, Mummel Forest Road, 6.1 km N of junction with Enfield Road, 31°17’36”S, 151°51’43”E (AM KS39776); 2 males, 3 females, Enfield State Forest, Mummel Forest Road, 8.8 km N of junction with Enfield Forest Road, 31°16’44”S, 151°50’47”E (AM KS39777); 1 male, Ewingar State Forest, Nogrigar Road, 29°9’17”S, 152°26’11”E (AM KS39771); 1 female, Frazer Reserve, Wahroonga, 33°43’S, 151°08’E (AM KS54478); 3 females, Gilgurry State Forest, Rivertree Fire Trail, on ridge 2 km NNE from turnoff, 28°45’18”S, 152°15’52”E (AM KS37021); 1 male, Jamberoo Mountain, 34°40’S, 150°43’E (AM KS65686); 53 males, 11 females, 6 juv., Jamieson Park, Narrabeen, 33°43’S, 151°18’E (AM KS44530, KS44534, KS44537–8, KS44542, KS44587, KS49025, KS49041, KS49631); 1 female, Kangaroo River State Forest, 1.5 km along Burns Road from junction with Kangaroo Creek Road, 30°04’19”S, 152°52’31”E (AM KS39789); 1 male, Kunderang Station Creek, above, NE facing slope, 30°48’26”S, 152°06’26”E (AM KS85383); 1 male, Ku-Ring-Gai Chase National Park, Challenger Track, 33°35’S, 151°16’E (WAM T108510); 1 male, Ku-Ring-Gai Chase National Park, McCarrs Creek, 33°39’47”S, 151°15’48”E (ZMUC); 4 males, 3 females, Mangrove, 3 km SW, 33°22’28”S, 151°15’39”E (AM KS61754, KS63308); 6 females, 7 juv., Marengo State Forest, 0.4 km ENE junction Hardens and Chaelundi Roads, 30°08’15”S, 152°25’18”E (AM KS35665); 1 male, 1 female, Marengo State Forest, 0.4 km SW on Chimney Road from Buckboard and Foamy Creek Roads,

30°06’9”S, 152°25’11”E (AM KS35673); 3 females, Marengo State Forest, 2.2 km NE on Chimney Road from Chaelundi Road, 30°06’21”S, 152°24’41”E (AM KS35677); 1 female, Money Creek, Gosford, 33°25’S, 151°20’E (AM KS84084); 7 females, Morgan Creek, 5.9 km NE from creek crossing, 28°46’31”S, 152°18’45”E (AM KS37028); 4 males, 1 female, Mount Kembla, Sydney Catchment Authority Reserve, 34°26’33”S, 150°44’24”E (AM KS63004, KS63039, KS128555); 3 males, Mt Boss State Forest (Easy Creek), 31°12’S, 152°24’E (AM KS43539); 12 males, 1 juv., Mt Boss State Forest (Fenwicks), 31°12’S, 152°24’E (AM KS43514); 29 males, 4 females, 1 juv., Mt Boss State Forest (Kota), 31°12’S, 152°24’E (AM KS84087); 1 male, Mt Gillies, near Mt Lindsay, 30°16’S, 150°10’E (QM S64001); 3 females, Mt Hyland Nature Reserve, 0.9 km S on Chaelundi Road from Big Bull Road, 30°9’14”S, 152°27’58”E (AM KS35669); 2 males, Mt Hyland Nature Reserve, 1.9 km N on Chaelundi Road from Big Bull Road, 30°08’55”S, 152°26’36”E (AM KS35664); 8 females, Mt Royal Road, 56 km NW Singleton, 32°15’S, 151°20’E (AM KS86801); 2 males, 1 female, Munmorah State Recreation Area, 33°12’34”S, 151°34’59”E (AM KS61860, KS61910, KS64050); 2 males, Munmorah State Recreation Area, 33°13’9”S, 151°34’15”E (AM KS61882,KS61903); 1 female, Muogamarra Nature Reserve, Pacific Hwy, 0.7 km SE Bird Gully Swamp, 33°33’42”S, 151°11’15”E (AM KS61818); 1 female, Nerang State Forest, Sharpers Creek, Boundary Road, N of Sharpers Road, 32°31’37”S, 152°07’13”E (AM KS39780); 1 female, New England National Park, opposite Tom’s Cabin, 30°29’55”S, 152°23’51”E (AM KS91020); 1 male, North Roto, North of Coombe, 32°03’S, 145°28’E (NMV K7704); 1 male, Oxley Wild Rivers National Park, East Kunderang Track, 30°48’25”S, 152°07’09”E (AM KS125239); 3 males, 1 female, 1 juv., Nowra, 34°53’S, 150°36’E (AM KS85384); 1 male, 2 females, Nullo Mountain State Forest, approx. 200 m from Coxs Creek Road and 8 km east of Coxs Creek, 32°44’40”S, 150°13’24”E (AM KS122739); 1 female, Oakwood State Forest, 250 m upstream of London Bridge Fire Trail, 29°54’23”S, 152°05’25”E (AM KS36954); 1 female, Phoenix Cave, Bungonia, 34°48’02”S, 150°00’57”E (AM KS14415); 1 female, Pittwater, Sydney, 33°36’S, 151°18’E (AM KS84088); 1 female, Ponderosa Forest Park, Nundle State Forest, 31°27’30”S, 151°15’00”E (QM S64000); 1 male, 3 females, Private land ‘Forster Kennels’, 150 m from Failford Road and 400m west of Failford, 32°05’33”S, 152°26’34”E (AM KS122815); 3 males, 4 females, Private Land ‘Franks Breakaway’, 1 km from Narango Road and 3 km east of Olinda, 32°50’05”S, 150°11’04”E (AM KS122759); 1 female, Putty State Forest; approx. 80 m from Hunter Main Trail and just past ‘3 Ways’, 32°45’26”S, 150°33’45”E (AM KS122282); 1 female, Ramornie State Forest, Main Creek, track off Mt Tindal Road, 29°43’01”S, 152°38’24”E (AM KS39768); 14 females, Ramornie State Forest, Mt Tindal Road, 29°41’49”S, 152°35’00”E (AM KS39763); 1 female, Ramornie State Forest, Mt Tindal Road, 29°42’12”S, 152°35’26”E (AM KS39764); 1 female, Ramornie State Forest, track off Mt Tindal Road, headwaters of Valoren, 29°42’18”S, 152°35’52”E (AM KS39765); 1 female, Ramornie State Forest, track off T-Ridge Road, 29°43’00”S, 152°33’23”E (AM KS39766); 5 females, Ramornie State Forest, T-Ridge Road, 29°43’13”S, 152°33’38”E (AM KS39767); 2 males, 1 female, Riamukka State Forest, 31°22’55”S, 151°45’44”E (AM KS74621); 3 females, Richmond Ranges State Forest, Mt Brown Road (0.1 km N from Y intersection), 28°37’56”S, 152°43’18”E (AM KS36022); 1 male, Royal National Park, Sir Bertram Stevens Drive, ca. 0.3 km E Artillery Hill, 34°04’55”S, 151°03’40”E (AM KS63165); 15 males, 7 females, Barrington Tops Reserve, Barrington Trail, 31°56’37”S, 151°26’53”E (AM KS102928); 1 male, Seven Mile Beach National Park, picnic area, 34°47’30”S, 150°46’44”E (AM KS119174); 1 female, 1 juv., St Georges Basin, 35°05’S, 150°35’E (AM KS22641); 5 females, Stewarts Brook State Forest, 31°56’15”S, 151°26’26”E (AM KS39787); 1 female, Stewarts Brook State Forest, 0.7 km W along unnamed logging track from Brook Road, 31°54’16”S, 151°23’36”E (AM KS39783); 26 males, 22 females, Stewarts Brook State Forest, 2.5 km S of junction of Tubrabucca and Omadale Brook Roads, 31°54’55”S, 151°23’59”E (AM KS39788); 1 female, Stewarts Brook State Forest, Bull Gully, W junction of Bull Gully and Bull Ridge Roads, 31°57’24”S, 151°22’36”E (AM KS39785); 2 females, Stewarts Brook State Forest, junction Bull Ridge Road and Barrington Forest Road, 31°57’18”S, 151°23’29”E (AM KS39784); 1 male, 4 females, Styx River State Forest, 30°31’18”S, 152°20’32”E (AM KS74658); 4 males, 1 female, 4 juv., Styx River State Forest, off Cunnawarra Trail, 30°32’36”S, 152°20’46”E (AM KS35648); 2 females, 5 juv., Styx River State Forest, off Cunnawarra Trail, about 2 km N Cunnawarra Creek, 30°32’49”S, 152°20’16”E (AM KS35649); 2 females, Sydney, 33°53’S, 151°13’E (MMUS); 1 female, Wahroonga Fraser Reserve, 33°43’S, 151°08’E (AM KS57285); 4 females, Warra State Forest, Moggs Swamp Fire Trail, 2.5 km N of Moggs Swamp Creek, 29°57’32”S, 151°58’18”E (AM KS36965); 2 females, Washpool National Park, North West Fire Trail, 29°27’30”S, 152°16’52”E (AM KS37043); 1 female, Washpool National Park, Washpool Forest Way, 29°24’47”S, 152°17’00”E (AM KS37042); 1 female, Washpool State Forest, Coobadjah Creek, 0.6 km from Moongem Road, 29°16’S, 152°22’E (AM KS9239); 1 female, Watagans National Park, approx. 40 m from Watagan Forest Road, 33°00’20”S, 151°23’57”E (AM KS122332); 1 male, Waterfall, 34°08’S, 151°00’E (AM KS85382); 1 female, Werrikimbe National Park, Cobcroft Creek Rest area, 31°13’S, 152°11’E (AM KS54482); 10 males, 3 females, Werrikimbe National Park, Kangaroo Flat, 31°10’23”S, 152°9’45”E (AM KS120919, KS120938, KS120888, KS120942, KS120952); 6 females, 0.5 km from Wheatley Creek Road on Camp Creek Road, 28°47’00”S, 152°19’29”E (AM KS37018); 3 females, 3.45 km along Wheatly Creek access Road on Camp Creek Road, 28°47’16”S, 152°18’56”E

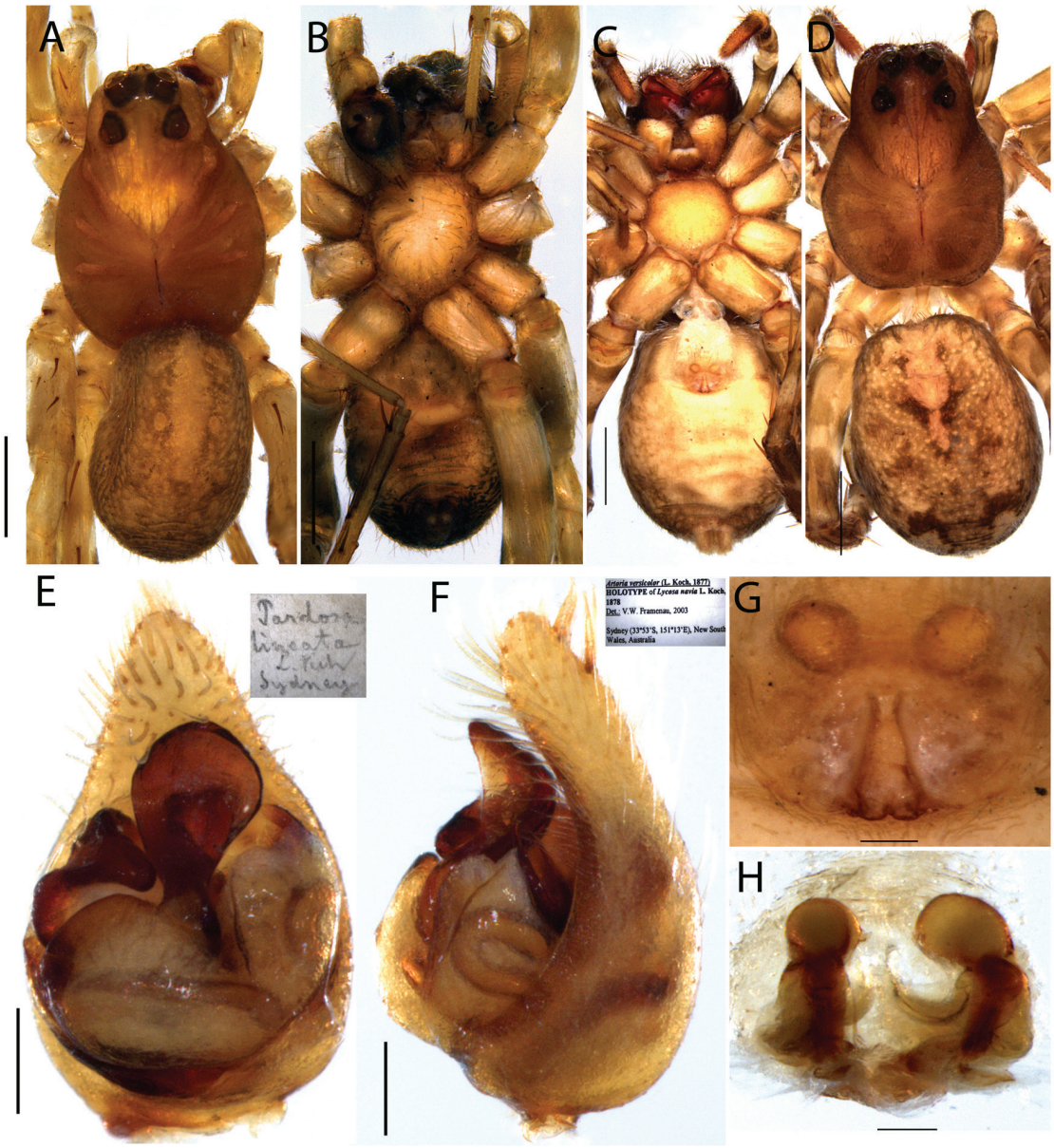

Figure 10. A, B, E, F, *Artoria lineata* (L. Koch, 1877), male holotype (ZSMH A0000052); **C, D, G, H**, *A berenice* (L. Koch, 1877), female holotype (ZSMH A0000051). **A**, habitus, dorsal view; **B**, habitus, ventral view; **C**, habitus dorsal view; **D**, habitus ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

(AM KS37026); 15 females, Wheatly Creek headwaters, 28°45’07”S, 152°19’44”E (AM KS37033); 1 female, 2.8 km from Wheatley Creek access Road (on Camp Creek), 28°47’10”S, 152°18’37”E (AM KS37012); 1 male, 1 female, Woronora Dam Catchment, Princes Hwy ca. 0.1 km NW Southern, freeway overpass, 34°11’31”S, 150°57’58”E (AM KS63250); 1 male, Wyrrabalong National Park, 33°16’47”S, 151°32’40”E (AM KS84086); 1 male, Wyrrabalong National Park, 33°16’48”S, 151°32’45”E (AM KS64056).

Diagnosis. Males of *A. berenice* can easily be distinguished from all other species of *Artoria* by the presence of a small tooth on the ventral side of the tegular apophysis (Fig. 11E). Females have a distinctive, poorly sclerotized epigyne that is much longer than wide and has the lateral borders widening posteriorly (Fig. 11G).

Description. *Artoria berenice* has been described in detail (Framenau 2002; 2005). A diagnosis and diagnostic images (Figs 10C, D, G, H, 11A–H, 46H) are provided here to facilitate identification, especially in differentiation from similar newly-described species.

Life history and habitat preferences. In NSW males and females appear from late August with highest numbers throughout October to January. Males are rarely found in March but then appear again in April and May. Females occur throughout summer and autumn until May, with two activity peaks in November/December and April and can sometimes be found into the winter

Figure 11. *Artoria berenice* (L. Koch, 1877), male and female (AM KS75080): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

months. A female with eggsac was found in November and one with spiderlings in December.

Artoria berenice is a forest species. Habitat descriptions found on collection labels include 'wet sclerophyll', 'semi-cleared woodland near *Pinus* plantation', 'grassy forest', '*Eucalyptus botryoides-Allocasuarina torulosa*, open forest', '*Angophora costata* woodland ridge top, open forest', but also 'gravel pit', and 'cave entrance, cave in doline'.

Distribution. In NSW, *A. berenice* is particularly found east of the Great Dividing Range, i.e. in the coastal South Eastern Queensland (SEQ), NSW North Coastal (NNC), Sydney Basin (SYB), and South East Corner (SEC) IBRA bioregions. It has been found west of the Great Dividing Range, with one single isolated record from central NSW (Fig.12). *Artoria berenice* has also been found in Queensland, eastern Victoria and throughout Tasmania and occurs in New Caledonia and Vanuatu (Framenau 2005).

Artoria bondi sp. n.

http://zoobank.org/78CF52A0-D2E1-4BEA-A976-8B6FB34379C9

Figs 6E–H, 12, 47D

Bondi Forest Runner

Material examined. Holotype male, Bondi State Forest, woodlot 3 (37°08'S, 149°09'E, New South Wales, AUSTRALIA), 26 Nov 1980 G. Gowing et al., pitfall trap,

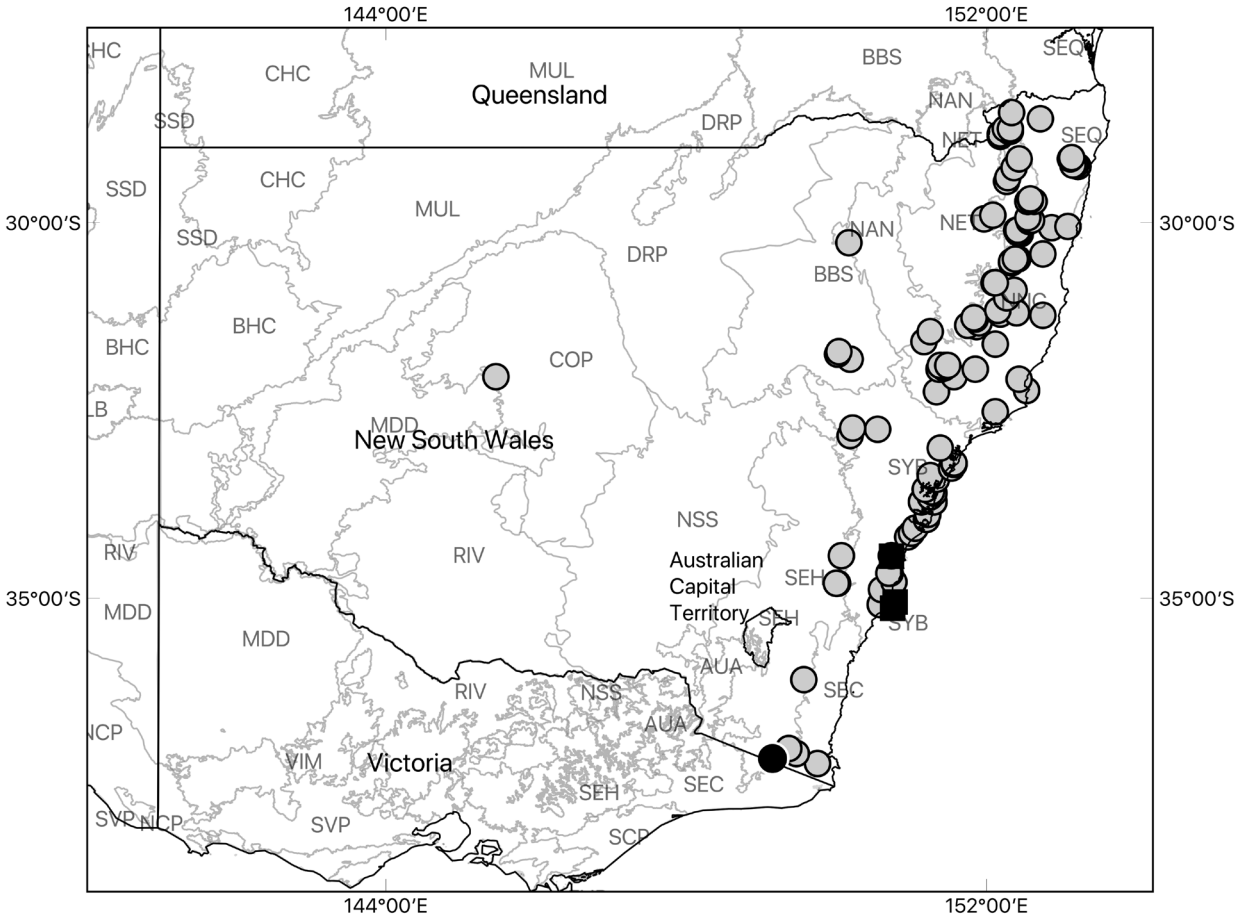

Figure 12. Distribution records of *Artoria berenice* (L. Koch, 1877) (grey circles), *A. bondi* sp. n. (full circle) and *A. booderee* sp. n. (full squares) in NSW. IBRA bioregions with spider records: BBS – Brigalow Belt South; MDD – Murray Darling Depression; NAN – Nandewar; NET – New England Tablelands; NNC – NSW North Coast; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Banksia (AM KS128073). Paratypes: 3 males, same as holotype (AM KS116188).

Other material examined. Known only from type material.

Etymology. The specific name is a noun in apposition referring to the type locality, Bondi State Forest.

Diagnosis. Similar to other species in the *lineata*-group, the tegular apophysis of the male pedipalp is spoon-shaped (Fig. 6G) in *A. bondi* sp. n., but is much smaller than in *A. lineata*, *A. quadrata* or *A. ulrichi*. In that, *A. bondi* sp. n. males resemble *A. strepera* sp. n. males in which the embolus and terminal apophysis protrude much further behind the tegulum than in *A. bondi* sp. n.

Description. Male (based on holotype, AM KS128073).

Total length 3.6.

Prosoma. Length 2.0, width 1.3, carapace yellow-brown, dusted with grey and indistinct dark radial pattern; lateral margin and central band pale yellow, broader in cephalic area, constricted halfway between cephalic area and fovea (Fig. 6E); sternum yellow-brown, dusted dark grey (Fig. 6F). Pale area covered with white setae.

Eyes. Diameter of AME: 0.08; ALE: 0.10; PME: 0.24; PLE: 0.15.

Anterior eye row. Straight, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 6F).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 6F).

Legs. Yellow brown with darker annulations; tibiae, metatarsi and tarsi darker, less annulated (Fig. 6E).

Opisthosoma. Length 1.6, width 1.2; cinnamon-brown with pale anterior cardiac mark and dark grey irregular pattern (Fig. 6E). Venter cinnamon with darker pattern (Fig. 6F), pale area covered with white setae; spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; cymbium tip with 4–5 macrosetae (Fig. 6G, H); dorsal scopula patch absent; tegular apophysis spoon-shaped, basally narrowed to 1/2, tip rounded not reaching margin of cymbium (Fig. 6G); palea about 1 1/2 as long as wide; basoembolic apophysis about twice as long as broad, tip pointed; embolus spatulate, widely semicircular; terminal apophysis small, tip rounded (Fig. 47D).

Female unknown.

Life history and habitat preferences. The type material of *Artoria bondi* sp. n. has been found in *Banksia* woodland in November.

Distribution. *Artoria bondi* sp. n. is currently known only from its type locality, the Bondi State Forest in south-eastern NSW in the South Eastern Highlands (SEH) IBRA region (Fig. 12).

Artoria booderee sp. n.

http://zoobank.org/67A4D8BC-28C5-4573-9E7A-4FEF7C074B9A

Figs 12, 13A–H, 47E

Booderee Forest Runner

Material examined. Holotype male, Booderee National Park, southern headland of Jervis Bay (35°08'49"S, 150°45'05"E, New South Wales, AUSTRALIA), 20–25 August 1999, L. Gibson, pitfall trap (AM KS128069). Paratypes: 2 males, same data as holotype (AM KS62929); 1 female, Beecroft Peninsula, northern headland of Jervis Bay (35°03'03"S, 150°47'21"E, New South Wales, AUSTRALIA), 1–5 August 1999, L. Gibson, pitfall trap (AM KS63500).

Other material examined. 4 males and 6 females in 6 records (all NSW). **AUSTRALIA: New South Wales:** 1 male, Beecroft Peninsula, northern headland of Jervis Bay, 35°03'03"S, 150°47'21"E (AM KS63504); 2 females, same locality (AM KS63448); 1 female, same locality (AM KS63480); 1 male, Booderee National Park, southern headland of Jervis Bay, 35°08'49"S, 150°45'05"E (AM KS62921); 2 males, same locality (AM KS62932); 3 females, same locality (AM KS84097); 1 male, Mt Kembla, Sydney Catchment Authority Reserve, 34°26'33"S, 150°04'24"E (AM KS128999).

Etymology. The specific name is a noun in apposition referring to the type locality, Booderee National Park.

Diagnosis. Males of *A. booderee* sp. n. share with *A. corowa* sp. n., *A. munmorah* sp. n. and *A. equipalus* sp. n. a distinctly bi-lobed tegular apophysis. They differ by having a more elongated cymbium with ca. 2–3 distinct macrosetae on its tip, with 4–5 present in *A. equipalus* sp. n. and absent in both other species of this group. The epigyne of female *A. booderee* sp. n. is incised posteriorly and most similar to that of *A. corowa* sp. n., but the anterior edge of the epigyne in *A. booderee* sp. n. is distinctly semi-circular, not so in *A. corowa* sp. n.

Description. Male (based on holotype, AM KS128069).

Total length 3.9.

Prosoma. Length 2.3, width 1.6; carapace light yellow-brown with indistinct darker radial pattern; indistinct broad lighter central band and narrow lighter marginal band (Fig. 13A); sternum light brown, dusted with grey (Fig. 13B).

Eyes. Diameter of AME: 0.09; ALE: 0.10; PME: 0.28; PLE: 0.22.

Anterior eye row. Straight, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 13B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 13B).

Legs. Yellow brown with darker annulations; tibiae, metatarsi and tarsi darker, less annulated (Fig. 13A).

Opisthosoma. Length 1.6, width 1.2; yellow-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern laterally (Fig. 13A). Venter light-brown with slightly darker pattern (Fig. 13B); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; cymbium tip with 3 macrosetae (Fig. 13E, F); dorsal scopula patch present; tegular apophysis distally widely scooped, deeply indented basally narrowing to 1/3 width, prolateral tip hooked, retrolateral tip rounded and reaching over margin of cymbium (Fig. 13E, F); palea about 1 1/2 times as long as wide; basoembolic apophysis about as long as broad, triangular; embolus broad, widely semicircular; terminal apophysis broad (Fig. 47E).

Female (based on paratype AM KS63500).

Total length 4.3.

Prosoma. Length 2.2, width 1.5; carapace and sternum colouration as male (Fig. 13C, D).

Eyes. Diameter of AME 0.07, ALE 0.09, PME 0.23, PLE 0.16.

Anterior eye row. Strongly procurved, evenly spaced.

Opisthosoma. Length 2.1, width 1.8; opisthosoma darker and cardiac mark smaller and less distinct (Fig. 13C).

Epigyne: atrium narrow, inverted u-shaped, strongly sclerotized at posterior tips (Fig. 13G, spermathecal heads globular around 2 x their diameter apart, stalks attached postero-laterally (Fig. 13H).

Life history and habitat preferences. *Artoria booderee* sp. n. appears to be a coastal species, as it has so far only been found on the northern and southern headlands around Jervis Bay and near Sydney. No habitat data were included on the locality labels.

All mature males at Jervis Bay were collected in August. The one from Sydney specimen was collected in December. Mature females were found in August, December and February suggesting that *A. booderee* sp. n. is a not tightly synchronised with any specific season.

Distribution. Known only from around Jervis Bay and the Mt Kembla Basin in the Sydney Basin (SYB) IBRA region (Fig. 12).

Artoria comleroi sp. n.

http://zoobank.org/60892164-9324-41AA-9B67-12CFF9B72541

Figs 15, 16A–H, 47F

Comleroi Forest Runner

Material examined. Holotype male, 40 m from Comleroi Road and 2 km N of Warkworth, private land [32°32'59"S, 151°01'22"E, New South Wales, AUSTRALIA, 27 Jun 2012, J.R. Gollan, M.A. Ashcroft, pitfall trap, She-oak forest no understory (AM KS128078). Paratype: 1 female, same as holotype (AM KS122431).

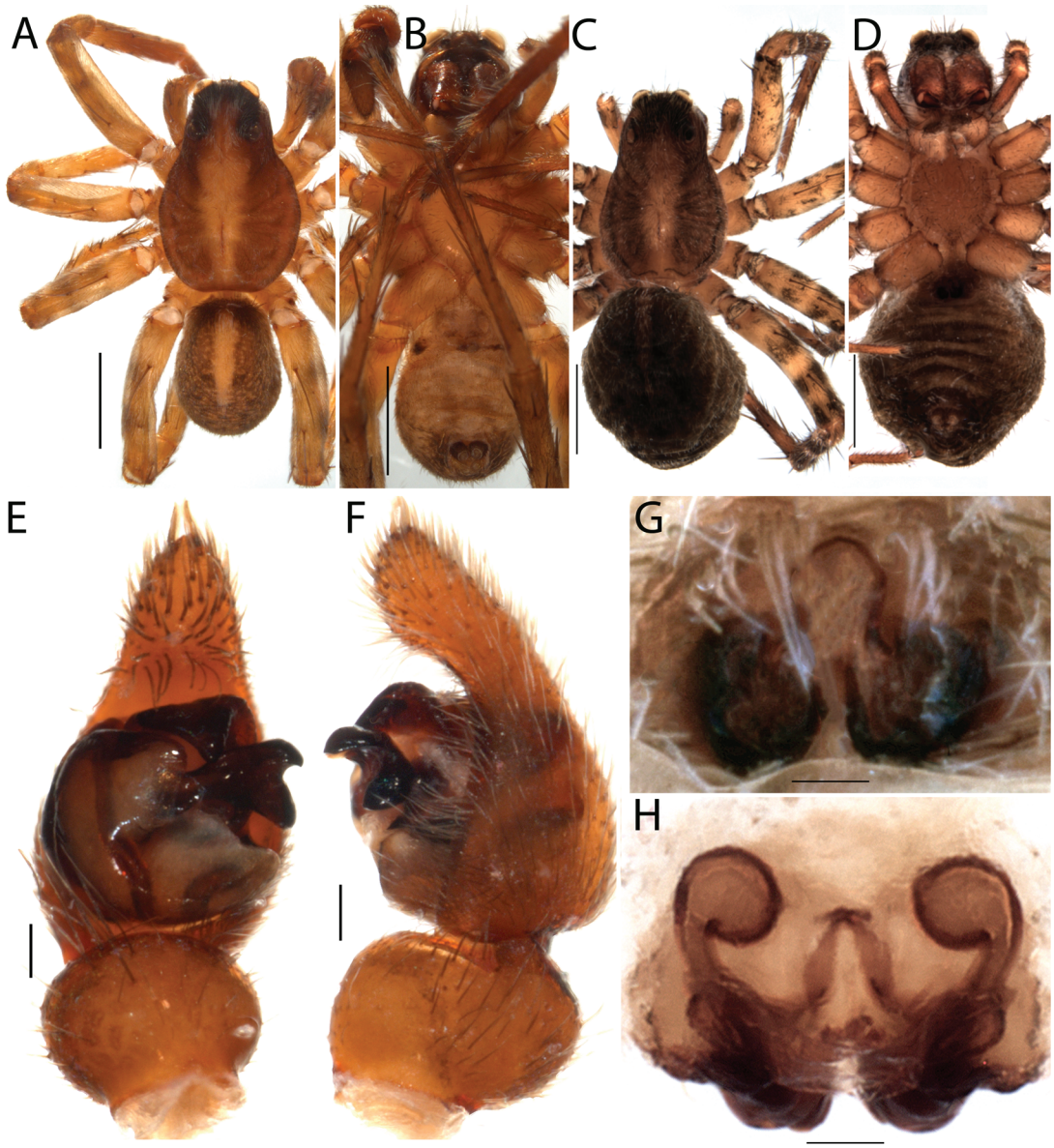

Figure 13. *A. booderee* sp. n., male holotype (AM KS128069), female paratype (AM KS63500): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Other material examined. Known only from type material.

Etymology. The specific name is a noun in apposition referring to the type locality, Comleroi Road.

Diagnosis. Males of *A. comleroi* sp. n. are most similar to those of *A. slatyeri* sp. n. based on the elongated spoon-shaped tegular apophysis. They differ by an apical small lobe being present in *A. comleroi* sp. n. Females of *A. comleroi* sp. n. display an epigyne shape with the atrium forming two distinct ovoid depressions in ventral view.

Description. Male (based on holotype, AM KS128078).

Total length 3.6.

Prosoma. Length 2.0, width 1.5; carapace dark grey; with distinct narrow lighter marginal band and narrow central band, widening towards posterior margin (Fig. 16A); sternum medium-brown, dusted with grey (Fig. 16B).

Eyes. Diameter of AME: 0.08; ALE: 0.09; PME: 0.23; PLE: 0.21.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae. Dark brown curved outwards.

Labium. Dark brown, with lighter anterior rim (Fig. 16B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 16B).

Legs. Pale, with darker annulations; metatarsi and tarsi darker, less annulated (Fig. 16A).

Opisthosoma. Length 1.6, width 1.2; dark grey with light yellow-brown anterior cardiac mark and lighter ir-

regular markings (Fig. 16A). Venter grey with indistinct lighter pattern (Fig. 16B); spinnerets dark grey.

Pedipalps. Tibia about twice long as broad; cymbium tip with 4–5 macrosetae (Fig. 16E, F); dorsal scopula patch present; tegular apophysis triangular, distally scooped, basally narrowed to 1/3, retrolateral tip rounded just reaching margin of cymbium (Fig. 16E); palea about as long as wide, basoembolic apophysis about as long as broad, broadly rounded; embolus broad, widely semicircular; terminal apophysis scooped (Fig. 47F).

Female (based on paratype, AM KS122431).

Total length 3.7.

Prosoma. Length 2.0, width 1.6; carapace and sternum colouration as male (Fig. 16C, D).

Eyes. Diameter of AME 0.08, ALE 0.07, PME 0.24, PLE 0.17.

Anterior eye row. Strongly procurved, evenly spaced.

Opisthosoma. Length 1.7, width 1.2; otherwise as male, (Fig. 16C, D).

Epigyne about as long as wide, strongly sclerotized at posterior rim, atrium formed by two distinct ovoid depressions (Fig. 16G); spermathecal heads globular about their diameter apart, spermathecal stalks attached medially and centrally bent (Fig16H).

Life history and habitat preferences. No habitat data were found with the type specimens. The male and female types were collected in June suggesting *Artoria comleroi* sp. n. to be winter mature.

Distribution. Known only from its type locality in the north-central Sydney Basin (SYB) IBRA region (Fig. 15).

Artoria corowa sp. n.

http://zoobank.org/B495DA60-47D8-4207-970D-D50718ECFE32

Figs 14A–H, 15, 47G

Corowa Forest Runner

Material examined. Holotype male, 14.5 km NW of Corowa, roadside (35°54’33”S,146°16’11”E, New South Wales, AUSTRALIA), November 2000, D. Freudenberger, pitfall trap (AM KS128079). Paratypes: 2 males, data as holotype (AM KS109666); 1 female, northern side of Oxley Highway, just at the bridge over Marthaguy Creek, equivalent to NPWS site NWB0654 (31°40’44”S, 148°31’07”E, New South Wales, AUSTRALIA), 21 November – 11 December 1999, *E. camaldulensis* patch, pitfall trap, L. Wilkie, R. Harris, T.M. Moulds (AM KS76583).

Other material examined. 7 males and 22 females in 16 records (all NSW). **AUSTRALIA: New South Wales**: 1 female, 50 m E of Boonal Road, 4.4 km N from site DRRP026, travelling stock route adjacent to ‘Mooreland’ station, 28°50’26”S, 149°42’07”E (AM KS76578); 1 male, 14.5 km NW of Corowa, roadside, 35°54’33”S,146°16’11”E (AM KS109665); 1 female, 3.0 km along Carlton-Brewarrina Road from ‘Murrawombie’ turnoff, E side of road, 31°06’38”S, 147°11’29”E (AM KS76577); 2 males, 1 female, 3.0 km along Carlton-Brewarrina Road from ‘Murrawombie’ turnoff, E side of road, equivalent to NPWS site NWB0616, 31°06’38”S, 147°11’29”E (AM KS76703); 1 male, 12 km NNW of Mulwala, ‘Namron Park’ farm, 35°53’01”S,145°57’40”E (AM KS109667) ; 1 male, 26 km NNW of Mulwala, 35°46’22”S,146°05’52”E (AM KS84351); 1 male, 1 female, Booti Booti National Park, south of Forster - northern end of dirt track to Jane’s Corner, 32°14’28”S, 152°32’50”E (AM KS63920); 1 female, ‘Kilyana’ Station, 21.5 km SE of Berrigan, 35°48’00”S, 145°58’9”E (AM KS84992); 12 females, ‘Llanver’ Station, 1.4 km W on Papworth Lane from junction with Backwater Road, 32°17’00”S, 147°53’07”E (AM KS76576); 3 females, same locality (AM KS76579–81); 1 female, E side of Nyngan-Canonba Road, 2.9 km S of ‘Fairview’ Station junction, 31°26’46”S, 147°15’10”E (AM KS76582); 1 male, Tambua Station, Cobar, 31°26’S,145°15’E (AM KS86354).

Etymology. The specific name is a noun in apposition referring to the type locality, NW of Corowa.

Diagnosis. Males of *A. corowa* sp. n. share with *A. booderee* sp. n., *A. munmorah* sp. n. and *A. equipalus* sp. n. a distinctly bi-lobed tegular apophysis. They differ from these by the tegular apophysis not protruding past the cymbium edge in ventral view and the presence of a disto-ventral cluster of macrosetae. The epigyne of female *A. corowa* sp. n. is incised posteriorly and therefore most similar to that of *A. booderee* sp. n., but lacking the distinct semi-circular anterior edge of the epigyne of *A. booderee* sp. n.

Description. Male (based on holotype, AM KS128079).

Total length 3.6.

Prosoma. Length 1.9, width 1.4; carapace dark grey; with no lighter marginal band and broad central band, constricted between eye region and fovea (Fig. 14 A); sternum shiny medium-brown, dusted with grey (Fig. 14B).

Eyes. Diameter of AME: 0.08; ALE: 0.09; PME: 0.24; PLE: 0.18.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae. Medium brown darker apically.

Labium. Dark brown, with lighter anterior rim (Fig. 14B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 14B).

Legs. Yellow-brown, with darker annulations; tibiae and metatarsi I darker, less annulated (Fig. 14A).

Opisthosoma. Length 1.7, width 1.2; dark grey with light yellow-brown anterior cardiac mark and lighter irregular markings (Fig. 14A). Venter grey with slightly lighter pattern (Fig. 14B); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; Cymbium tip with cluster of macrosetae distal-ventrally (Fig. 14E, F); dorsal scopula patch present; tegular apophysis distally with two semicircular appendices, bent, basally narrowed to ½ width, retrolateral tip just reaching margin of cymbium (Fig. 14E, F); palea about 1 ½ times as long as

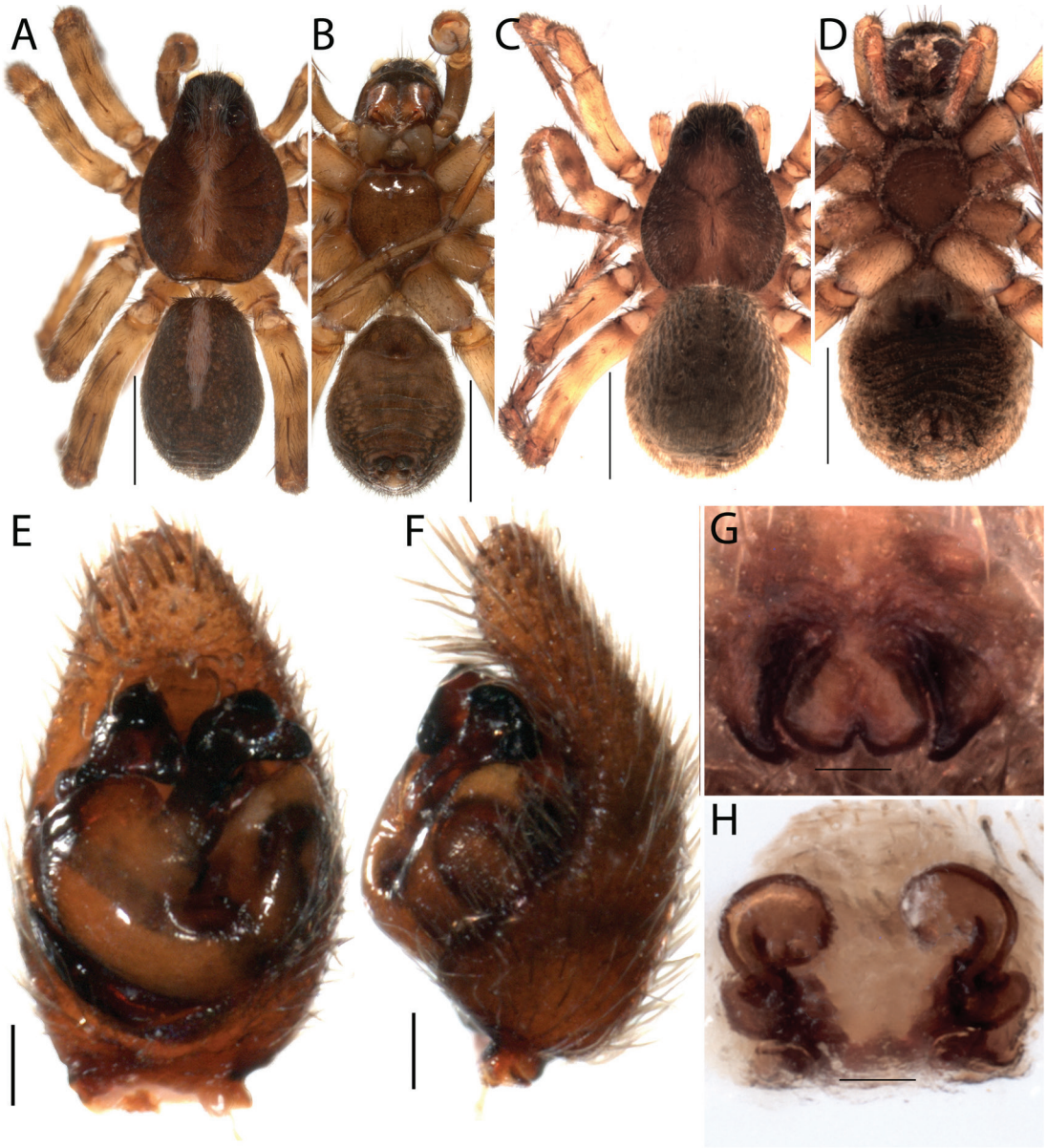

Figure 14. *Artoria corowa* sp. n., male holotype (AM KS128079), female paratype (AM KS76583): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

wide, basoembolic apophysis large, triangular; embolus straight, reaching only half the width of palea; terminal apophysis indistinct (Fig. 47G).

Female (based on paratype AM KS76583).

Total length 4.9.

Prosoma. Length 2.6, width 1.8; carapace and sternum colouration as male (Fig. 14C, D).

Eyes. Diameter of AME 0.09, ALE 0.08, PME 0.28, PLE 0.23.

Anterior eye row. Strongly procurved, evenly spaced.

Opisthosoma. Length 2.6, width 2.1; opisthosoma similar colour as male but cardiac mark less distinct (Fig. 14C, D).

Epigyne: slightly wider than long, strongly sclerotized lateral posterior tips, atrium shaped like an inverted love-heart with posterior incision (Fig. 14G); spermathecal heads globular and around their diameter apart, spermathecal stalks attached laterally and strongly S-shaped (Fig. 14H).

Life history and habitat preferences. There was little but varied habitat data available with the specimens, including 'roadside', '*Eucalyptus largiflorens* patch', '*Eucalyptus camaldulensis* patch', *Casuarina cristata* patch' and 'native grassland', are insufficient to form a clear account of the habitat preferences of *A. corowa* sp. n. remain unclear. All specimens were collected between November and December, suggesting the species is largely summer mature. The single coastal record of the species, a mature male and female, is from May (autumn).

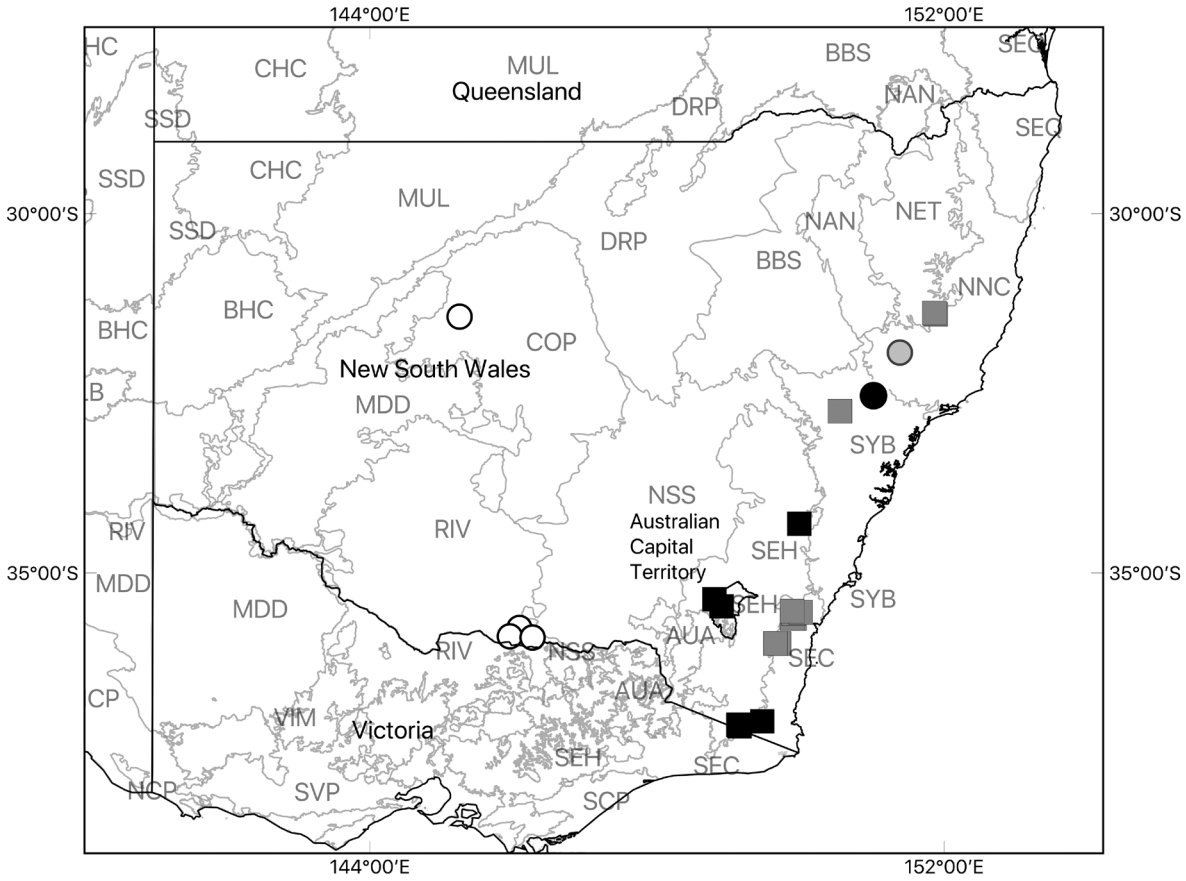

Figure 15. Distribution records of *Artoria comleroi* sp. n. (full circle), *A. corowa* sp. n. (open circles), *A. equipalus* sp. n. (grey circle), *A. extraordinaria* sp. n. (grey squares) and *A. flavimana* Simon, 1909 (full squares) in NSW and ACT. IBRA bioregions with spider records: AUA – Australian Alps; COP – Cobar Peneplain; DRP – Darling River Plains; NET – New England Tablelands; NNC – NSW North Coast; RIV – Riverina; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Distribution. *Artoria corowa* sp. n. is known from locations in central NSW from the Cobar Peneplain (COB), Darling River Plains (DRP) and Riverina (RIV) IBRA regions, with one isolated coastal record from the NSW North Coast (NNC) IBRA region (Fig. 15).

Artoria equipalus sp. n.

http://zoobank.org/1B77FE1F-B9F6-4517-A47C-4D74CFEFDA13

Figs 15, 17A–H, 47H

Horse Swamp Forest Runner

Material examined. Holotype male, Barrington Tops National Park, 100 m from Horse Swamp Track (31°56’00”S, 151°23’04”E, New South Wales, AUSTRALIA), 11–21 January 2012, J.R. Gollan, M.A. Ashcroft, pitfall trap, upland swamp (AM KS128077). Paratype: 1 female, same data as holotype (AM KS122934).

Other material examined. Known only from type material.

Etymology. The specific epithet is a compound noun in apposition derived from the Latin *equus* (= horse) and *palus* (= swamp) and refers to the type locality, near Horse Swamp Track.

Diagnosis. Males of *A. equipalus* sp. n. share with *A. booderee* sp. n., *A. corowa* sp. n. and *A. munmorah* sp. n. a distinctly bi-lobed tegular apophysis, but differ from these by the basal lobe of the tegular apophysis being more sclerotized and oriented more ‘horizontally’ in ventral view. The cymbium tip in *A. equipalus* has 4–5 macrosetae, which are absent in *A. corowa* sp. n. and *A. munmorah* sp. n. *Artoria booderee* sp. n. has 2–3 macrosetae on the cymbium tip which is more elongate than that of A. equipalus sp. n. The epigyne of female *A. equipalus* sp. n. is most similar to that of *A. mungo* sp. n., but the shape of the spermathecal heads is very different in both species with in particular with respect to the insertion of the spermathecal stalks (postero-medial in *A. equipalus* sp. n., lateral in *A. mungo* sp. n.).

Description. Male (based on holotype, AM KS1128077).

Total length 3.0.

Prosoma. Length 1.7, width 1.2; carapace dark grey; with distinct broad lighter marginal band and broad lighter central band, widening towards eye region (Fig. 17A); sternum light brown, margin slightly grey (Fig. 17B).

Eyes. Diameter of AME: 0.07; ALE: 0.08; PME: 0.23; PLE: 0.16.

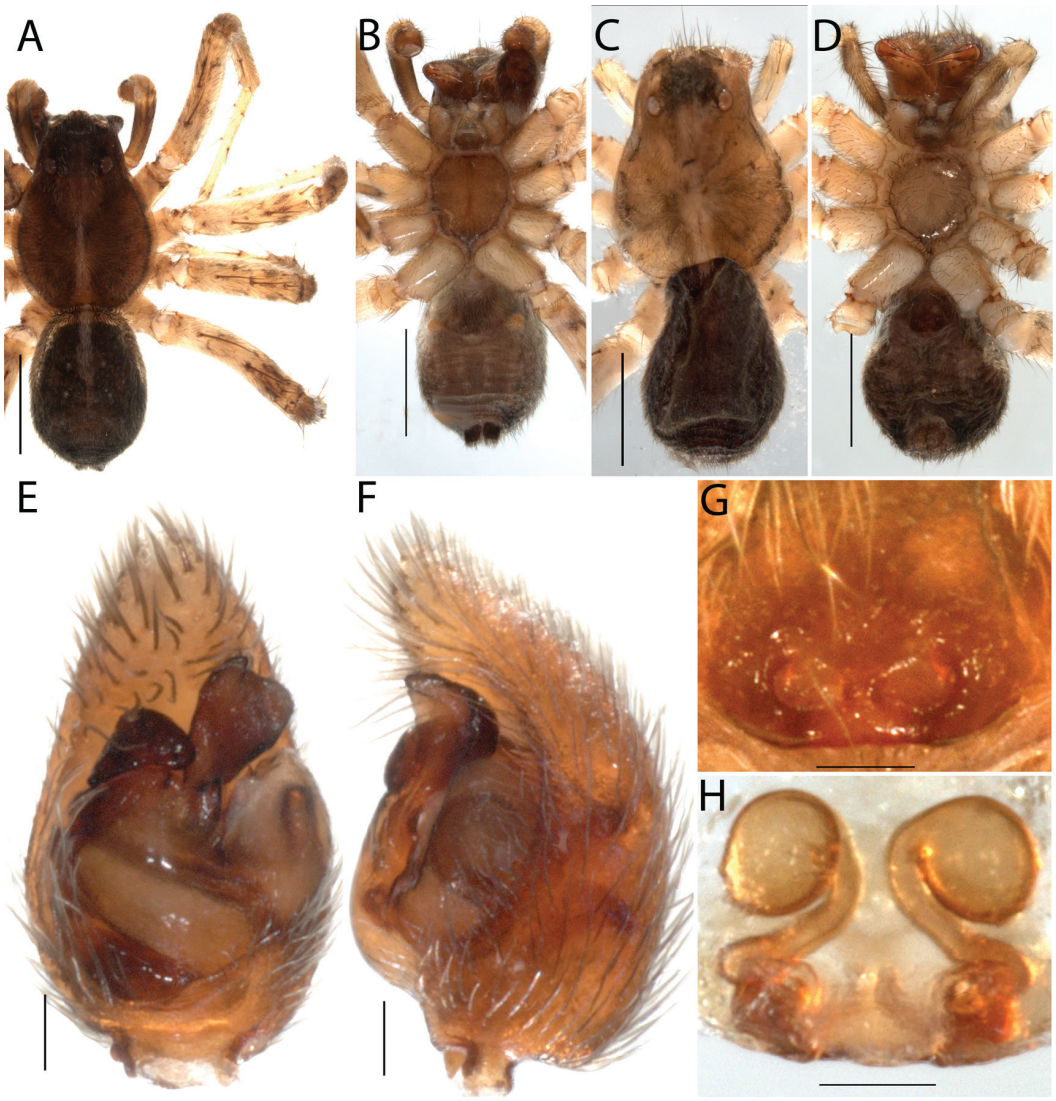

Figure 16. *Artoria comleroi* sp. n., male holotype (AM KS128078), female paratype (AM KS122431): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 17B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 17B).

Legs. Tibiae, metatarsi and tarsi of leg I very dark to almost black; other legs light brown, annulated (Fig. 17A).

Opisthosoma. Length 1.3, width 1.0; cinnamon-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 17A). Venter cinnamon with darker pattern laterally (Fig. 17B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with 4–5 macrosetae (Fig. 17E, F); dorsal scopula patch absent; tegular apophysis distally scooped, deeply indented, bent retrolaterally, basally narrowed to 1/3 width, tip reaching margin of cymbium (Fig. 17E); palea about as long as wide, basoembolic apophysis large, triangular; embolus broad, straight; terminal apophysis broad, retrolaterally bifurcate (Fig. 47H).

Female (based on AM KS122934).

Total length 5.3.

Prosoma. Length 2.5, width 1.8; carapace and sternum colouration as male (Fig. 17C, D).

Eyes. Diameter of AME 0.10, ALE 0.14, PME 0.26, PLE 0.17.

Anterior eye row. Straight, evenly spaced.

Opisthosoma. Length 2.8, width 2.1; otherwise as male, but legs I not darker, not annulated and opisthosoma pattern more obscure (Fig. 17C, D).

Epigyne slightly wider than long, poorly sclerotised at posterior tips, atrium lighter inverted u-shaped (Fig. 17G); spermathecal heads globular about diameter apart, spermathecal stalks short, attached posteriorly (Fig.17H).

Life history and habitat preferences. The habitat description with the type material is ‘upland swamp’. Spi-

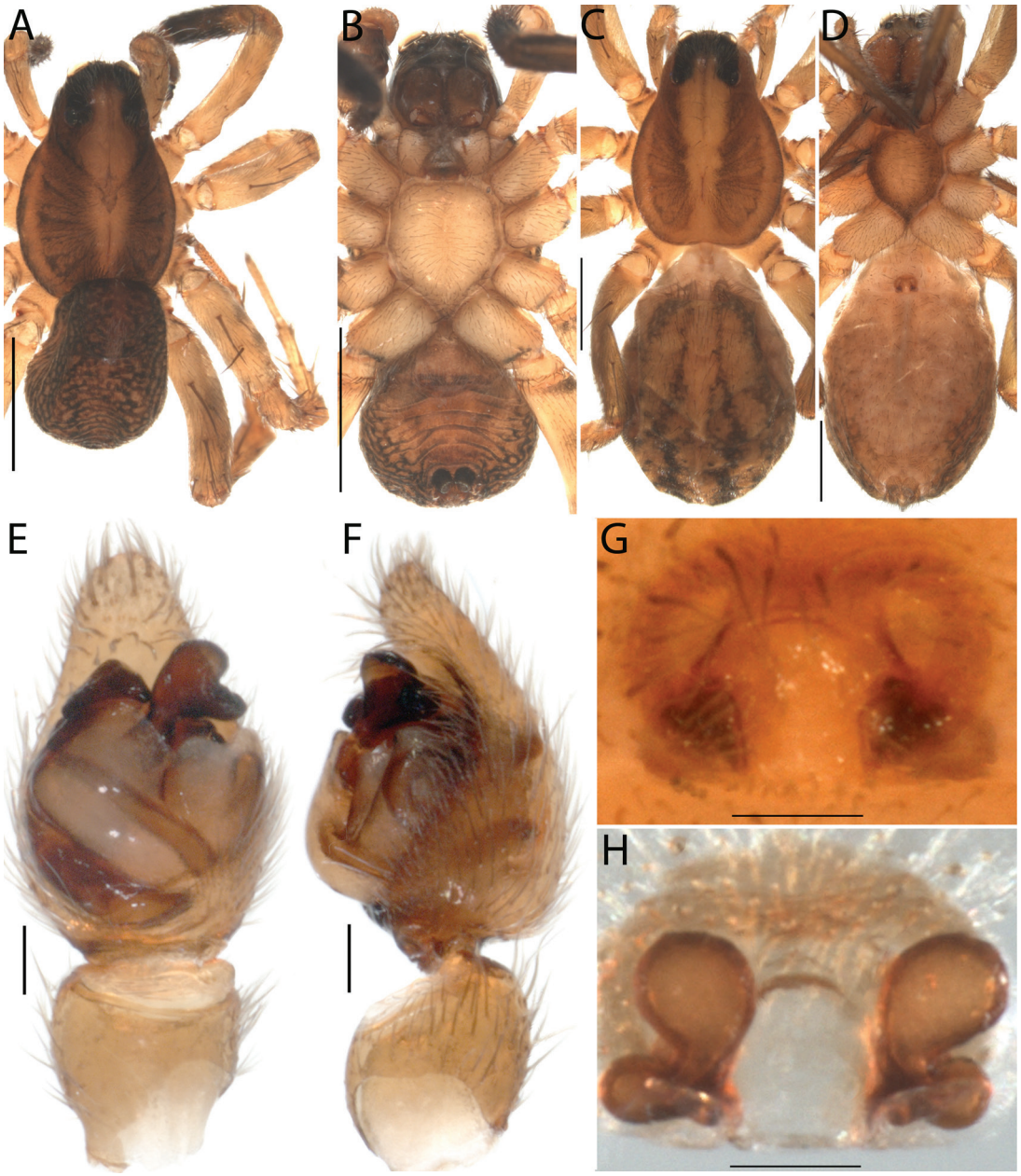

Figure 17. *Artoria equipalus* sp. n., male holotype (AM KS128077), female paratype (AM KS122934): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

ders were found in January suggesting *Artoria equipalus* sp. n. to be summer mature.

Distribution. *Artoria equipalus* sp. n. is known only from its type locality in Barrington Tops National Park in the NSW North Coast (NNC) IBRA region (Fig. 15).

Artoria extraordinaria sp. n.

http://zoobank.org/9701DAC2-672B-4B8F-BC2A-E37F465485C1

Figs 2E, 15, 18A–H, 47I

Curious Forest Runner

Material examined. Holotype male, Macquarie Road, 70 m S from junction with Milo Road, Buckenbowra State Forest (35°38'S, 149°53'E, New South Wales, AUSTRALIA], 16 Mar 1999, R. Harris, H.M. Smith, leaf litter sample (AM KS128074). Paratype: 1 female, same data as holotype (AM KS68638).

Other material examined. 10 males in 9 records (all NSW). **AUSTRALIA: New South Wales** : 1 male, 30 km SE of Braidwood, 250 m along Corn Trail Road from junction with Highway 54, 35°33'43"S, 150°00'32"E (AM KS68635); 1 male, Deua National Park, Dampier Mt Fire Trail, 3.5 km E of junction with Minuma Range Fire Trail, 35°59'13"S, 149°42'40"E (AM KS68637); 1 male, Deua National Park, Minuma Range Fire Trail, approx.. 1.5 km ENE of apex of Dampier Mt, 35°59'10"S,

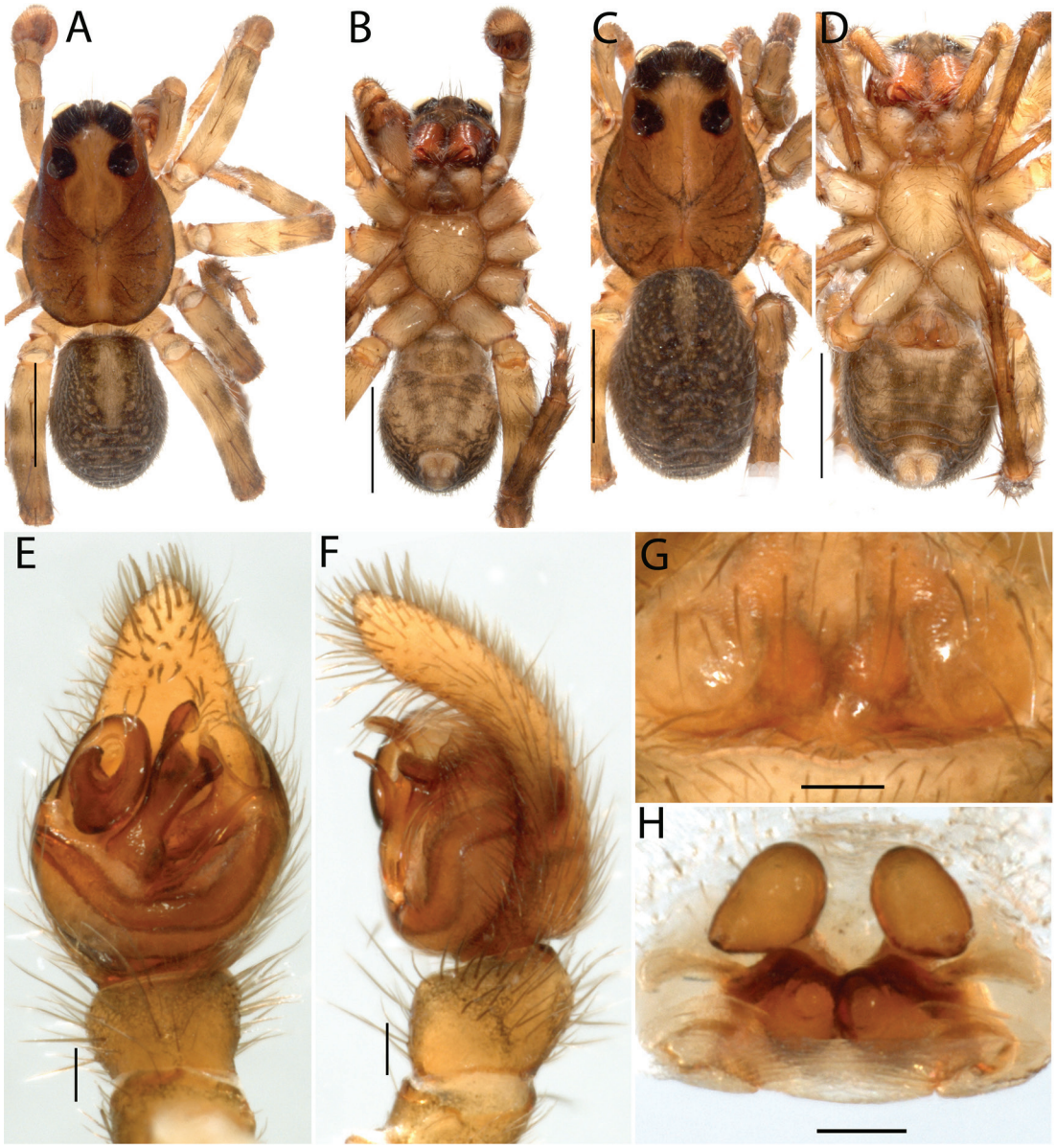

Figure 18. *Artoria extraordinaria* sp. n., male holotype (AM KS128074), female paratype (AM KS68638): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

149°39’22”E (AM KS64397); 2 males, Enfield State Forest, Dodds Fire Trail, 1 km from Enfield Road, 31°23’47”S, 151°52’59”E (AM KS39804); 1 male, Enfield State Forest, Dodds Fire Trail, about 3 km from Enfield Road, 31°24’17”S, 151°53’00”E (AM KS39803); 1 male, Monga State Forest, Lookout Road, 35°34’47”S, 149°54’18”E (AM KS64399); 1 male, Monga State Forest, Northern Fire Trail, 1.85 km N from junction with McKeuns Road, 35°32’10”S, 149°53’17”E (AM KS68634); 1 male, Monga State Forest, W side of Turtle Creek Fire Trail, 1.7 km from junction with Boundary Fire Trail, 35°38’20”S, 149°55’52”E (AM KS64398); 1 male, Putty State Forest; approx. 80 m from Hunter Main Trail and just past ‘3 Ways’, 32°45’26”S, 150°33’45”E (AM KS128874);

Etymology. The specific epithet is an adjective in apposition derived from Latin (*extraordinaria* – unusual) and refers to the unusual shape of the basoembolic apophysis of the male pedipalp.

Diagnosis. The male pedipalp of *A. extraordinaria* sp. n. is highly unusual within the genus owing to the shape of the basoembolic apophysis, which forms an almost 360-degree circle (Fig. 47I). The female epigyne is poorly defined with two almost transparent lateral lobes (Fig. 18G).

Description. Male (based on holotype, AM KS1128074).

Total length 3.6.

Prosoma. Length 2.1, width 1.4; carapace light reddish-brown with dark radial pattern and black V-shaped pattern between cephalic and thoracic region; indistinct

and irregular broad lighter central and marginal band (Fig. 18A); sternum pale, with darker margin (Fig. 18B).

Eyes (Fig. 2E). Diameter of AME: 0.10; ALE: 0.09; PME: 0.30; PLE: 0.20.

Anterior eye row. Strongly procurved, distance between AME/ALE at least twice AME/AME.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 18B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 18B).

Legs. Yellow brown with darker annulations; metatarsi and tarsi darker, less annulated (Fig. 18A).

Opisthosoma. Length 1.5, width 1.1; dark grey with pale anterior cardiac mark and light irregular pattern (Fig. 18A). Venter pale with darker pattern (Fig. 18B); spinnerets pale.

Pedipalps. Tibia as long as broad; cymbium tip with cluster of macrosetae (Fig. 18E, F); dorsal scopula patch present; tegular apophysis spatulate with two lateral appendices, basally narrowed to 2/3 width, retrolateral tip pointed inwards not reaching margin of cymbium (Fig. 18E); palea about 1 1/2 times as long as wide; basoembolic apophysis small, rounded; embolus elongated coiled with long thin tip, reaching beyond terminal apophysis; terminal apophysis small with pointed tip (Fig. 47I).

Female (based on AM KS68638).

Total length 3.8.

Prosoma. Length 2.0, width 1.4; carapace and sternum colouration as male (Fig. 18C).

Eyes. Diameter of AME 0.08, ALE 0.09, PME 0.30, PLE 0.21.

Anterior eye row. Strongly procurved, distance between AME/ALE at least twice AME/AME.

Opisthosoma. Length 1.8, width 1.2; otherwise as male, but opisthosoma pattern more obscure (Fig. 18C, D).

Epigyne. About as long as wide, poorly sclerotised at posterior tips, atrium lighter (Fig. 18G); spermathecal heads ellipsoid in inverted v-shaped position about 1/2 short diameter apart, spermathecal stalks attached ventrally, globular at base (Fig. 18H).

Life history and habitat preferences. Based on locality data, *Artoria extraordinaria* sp. n. is a forest species. Detailed habitat data were not available on locality labels of the specimens. Most specimens were collected between February and April, with one male recorded from June, suggesting *Artoria extraordinaria* sp. n. to be autumn to winter mature.

Distribution. This species was found some distance from the coast at scattered localities in the NSW North Coast (NNC), Sydney Basin (SYB) and South Easter Corner (SEC) IBRA bioregions (Fig. 15).

Artoria flavimana Simon, 1909

Figs 1C, 15, 19 A–H, 46D

Yellow-handed Forest Runner

Artoria flavimanus Simon, 1909: 192, fig. 9.- Rainbow 1911: 275; McKay 1973: 380; McKay 1985: 74.

Artoria flavimana Simon.- Bonnet 1955: 750.

Artoriella flavimanus (Simon).- Roewer 1955: 233; Roewer, 1960: 563.

Lycosa neboissi McKay, 1976: 413–416, fig. 1E–I.- McKay 1985: 80 (synonymy established in Framenau (2002)).

Material examined. Holotype female of *Artoria flavimanus* Simon, 1909, Mundaring Weir ('Station 101') (31°57'S 116°10'E, Western Australia, AUSTRALIA], collected during the 'Hamburger südwest-australische Forschungsreise 1905' (ZMB 10548). Holotype female of *Lycosa neboissi* McKay, 1976, Rosanna (37°45'S, 145°04'E, Victoria, AUSTRALIA], 18 July 1954, A. Neboiss (NMV K32). Paratype male of *Lycosa neboissi* McKay, 1976, Rosanna (37°45'S, 145°04'E, Victoria, AUSTRALIA), 5 June 1954, A. Neboiss (MV K33).

Other material examined. 41 males, 9 females and 1 juvenile in 32 records (2 from the ACT, 30 from NSW). **AUSTRALIA: Australian Capital Territory:** 1 female, 1 juv., Piccadilly Circus, 35°22'S, 148°48'E (ANIC); 1 female, Tidbinbilla Nature Reserve, 35°28'S, 148°54'E (AM KS13963). **New South Wales:** 1 male, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS99424); 1 male, 1 female, Bondi State Forest, 37°08'S, 149°09'E (AM KS12197, KS15203); 4 male, 3 females, Bondi State Forest, S of Bombala, Woodlot 1, 37°08'S, 149°09'E (AM KS11926, KS11934, KS11941, KS11951, KS18062–3); 34 males, 3 females, Bondi State Forest, S of Bombala, Woodlot 2, 37°07'S, 149°08'E (AM KS69080, KS69085, KS69091, KS69105, KS69122, KS69137, KS69714–5, KS69719, KS69724–5, KS70163–4, KS70238, KS71380–1, KS71384, KS71389, KS71394, KS71396); 1 male, Wombeyan Caves area, hillside north of camping ground, 34°19'S, 149°59'E (AM KS22498).

Diagnosis. Amongst currently described *Artoria*, *A. flavimana* is most similar to *A. avona* Framenau, 2002, a species not yet recorded from NSW or the ACT (Framenau 2002). The gaping shape of the tegular apophysis of the male pedipalp (Fig. 46D) is distinctive. Males can also be identified be the distinctive leg formula, with leg I longer than leg IV (I>IV>II>III). The shape of the epigyne of *A. flavimana* has a semi-circular to pentagonal atrium which includes an isolated ovoid median septum (Fig. 19G).

Description. *Artoria flavimana* has been described in detail (Framenau 2002). A diagnosis and diagnostic images (Figs 1C, 19A–H, 46D) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria flavimana* occurs predominantly in eucalypt forests. In NSW and ACT, most males were recorded in May and August and females also into November. Reproductive activity appears to occur mostly in winter.

Distribution. *Artoria flavimana* occurs in south-eastern NSW and the ACT in the South East Corner (SEC), South Eastern Highlands (SEH) and Australian Alps (AUA) IBRA regions (Fig. 15). The species is also known from Victoria, Tasmania, south-eastern South Australia and south-western Western Australia (Framenau 2002, 2005).

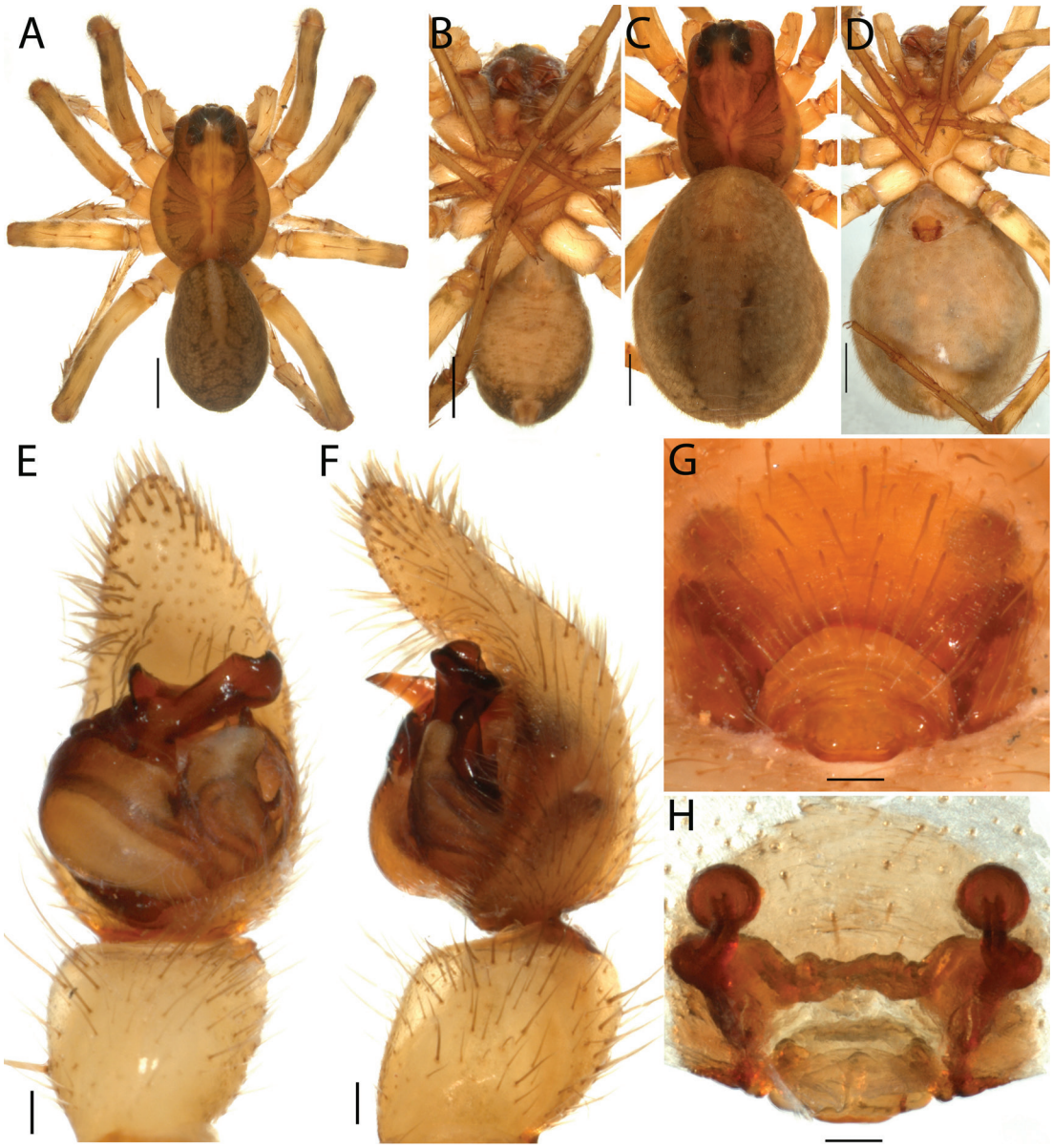

Figure 19. *A flavimana* Simon, 1909, male and female (AM KS52091): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

***Artoria gloriosa* (Rainbow, 1920)**

Figs 20A–H, 21, 46E

Lord Howe Island Forest Runner

Lycosa gloriosa Rainbow, 1920: 261–262, pl. 30, figs 94–95.- Roewer 1955: 272; Bonnet 1957: 2643; McKay 1973: 379; McKay 1979: 238–240, fig. 1F–K; McKay 1985: 77.

Artoria gloriosa (Rainbow).- Framenau 2005: 279–282, figs 7A–F, 8.

Material examined. Holotype female, Lord Howe Island, (31°31'S, 159°04'E, New South Wales, AUSTRALIA), A.M. Lea, December 1915–January 1916 (SAM NN038) (examined).

Other material examined. 153 males, 67 females (1 with eggsac, 3 with spiderlings) and 51 juveniles in 114 records (all NSW). **AUSTRALIA**: **New South Wales: *Lord Howe Island*:** 7 males. 4 female, 2 juv., no exact locality (AM KS55, KS10815, KS86485–6, QM); 1 male, Anderson Road, south end, 31°30'S, 159°04'E (QM S64113); 1 female, Behind Leanda-Lei, 31°30'S, 159°04'E (QM S64109); 1 female, 13 juv., Beside Little Island, 31°30'S, 159°04'E (QM S64118); 3 males, 1 female, 6 juv., Dawson Point Ridge, summit, 31°30'S, 159°04'E (QM S64115); 1 male, Lagoon Road, opposite hospital, 31°30'S, 159°04'E (QM S64119); 1 male, 1 female, Lagoon Road, opposite hospital, 31°30'S, 159°04'E (QM S64116); 1 male, 30 m below main cliff of Mt Lidgbird, 31°34'02"S, 159°04'05"E (AM KS79105); 3 males, 50 m S of summit of Mt Eliza,

W face, 31°30’57”S, 159°02’25”E (AM KS75873, KS75885); 9 males, 3 females, base of Round Face, Mt Lidgbird, Far Flats, 31°34’9”S, 159°04’35”E (AM KS76126–8, KS76131, KS76134, KS76136, KS79097, KS79108); 3 males, 4 females, base of Scaly Bark Ridge, trail to Mt Gower, 31°34’37”S, 159°04’40”E (AM KS76192, KS76197, KS76200–1, KS79102); 1 female, behind Research Station, 31°31’37”S, 159°03’58”E (AM KS79096); 1 male, E end of Boat Harbour Beach, 31°33’37”S, 159°05’53”E (AM KS76114); 1 male, 1 female, E face of Mt Lidgbird, base of summit plateau, 31°34’27”S, 159°05’04”E (AM KS73167, KS75822); 2 females, E slope of Dawsons Point Ridge, near top, 31°30’58”S, 159°02’58”E (AM KS75906, KS75909); 2 females, E slope of Malabar Ridge above Neds Beach, 31°31’03”S, 159°03’38”E (AM KS75918, KS75922); 2 females, Lord Howe Island, E slope of Phillip Point (North Head), 31°31’20”S, 159°02’29”E (AM KS75937); 1 female, E slopes of Roach Island, 31°30’08”S, 159°04’9”E (AM KS75866); 1 male, footslopes of Mt Lidgbird, 200 m E of Goat House Trail, 31°33’41”S, 159°05’15”E (AM KS76084); 1 female, Goat House track, 400m from Goat House Cave, 31°33’15”S, 159°04’57”E (AM KS79103); 1 female, junction of Kims Lookout Trail and North Beach Trail, 31°31’08”S, 159°03’00”E (AM KS75913); 18 males, 1 female, Lagoon Beach between rubbish tip & airstrip, 31°32’31”S, 159°04’31”E (AM KS75989, KS75996, KS76001, KS76007, KS76010, KS79107); 1 female, 1 juv., Lagoon Road, N of Blinky Beach Road turnoff, 31°32’30”S, 159°04’30”E (AM KS56); 1 male, 2 females, Little Slope, 31°35’12”S, 159°04’03”E (AM KS75849, KS76229, KS76231); 1 male, 3 females, 3 juv., Malabar Ridge Saddle, 31°30’S, 159°04’E (QM S64108, S64110); 1 male, Mt Gower summit, 31°35’23”S, 159°04’22”E (AM KS76235); 1 male, 1 female, 9 juv., Mt Gower summit (NE), 31°30’S, 159°04’E (QM S64114, S64117); 1 female, Mt Gower, midway down last gully, 31°35’13”S, 159°04’18”E (AM KS85177); 1 male, Mt Gower, ridge, 31°35’18”S, 159°04’20”E (AM KS85173); 1 female, Mt Gower, top of Gully N of igloo, 31°35’07”S, 159°04’36”E (AM KS85182); 1 female, Mt Gower summit, near lookout, 31°35’06”S, 159°04’32”E (AM KS70559); 6 males, 3 females, Mt Gower, bottom of gully, near igloo, 31°35’04”S, 159°04’31”E (AM KS85174); 7 males, Mt Gower, bottom of ridge, N of igloo, 31°35’05”S, 159°04’34”E (AM KS85171); 4 males, 1 female, 2 juv., Mt Gower, bottom of ridge, S of igloo, 31°35’08”S, 159°04’30”E (AM KS85172); 1 female, Mt Gower, end of ridge, 31°35’11”S, 159°04’21”E (AM KS85176); 2 males, 2 juv., Mt Gower, level 3, 31°35’S, 159°05’E (AM KS1421); 1 male, , Mt Gower, midway down gully near igloo, 31°35’06”S, 159°04’32”E (AM KS86841); 1 male, 1 female, Mt Gower, midway down gully near igloo, 31°35’06”S, 159°04’32”E (AM KS85170); 2 males, 2 females, Mt Gower, midway down large gully with waterfall, 31°35’08”S, 159°04’27”E (AM KS85175); 4 males, Mt Gower, midway down ridge, N of igloo, 31°35’05”S, 159°04’35”E (AM KS85178); 10 males, 2 females, Mt Gower, midway down ridge, S of igloo, 31°35’9”S, 159°04’31”E (AM KS85181); 1 male, Mt Gower, Razorback, 31°35’30”S, 159°04’18”E (AM KS76249); 26 males, 2 female, Mt Gower, top of gully, N of igloo, 31°35’07”S, 159°04’36”E (AM KS84008, KS85179); 2 males, Mt Gower, top of ridge S of igloo, 31°35’11”S, 159°04’31”E (AM KS79104, KS85180); 1 male, Mt Gower summit, near igloo, 31°31’16”S, 159°05’01”E (AM KS79109); 1 male, Mt Lidgbird, S face, summit tabletop base, 31°34’37”S, 159°05’04”E (AM KS76166); 1 male, N bank of Rocky Run Creek, Boat Harbour trail, 31°33’19”S, 159°05’33”E (AM KS76059); 1 male, 3 females, 11 juv., NE area of Mt Gower summit, 31°35’12”S, 159°04’42”E (AM KS52–4); 1 female, Neds Beach Road, 31°31’S, 159°03’E (AM KS84014); 1 male, Peach Tree Ridge, below Intermediate Hill, 31°33’01”S, 159°05’05”E (AM KS76026); 2 males, 2 females, S end of Salmon Beach, 31°34’08”S, 159°04’28”E (AM KS75816, KS79098-9, KS79110); 7 males, 1 female, Stephens Reserve, New Settlement, 31°31’33”S, 159°03’53”E (AM KS76253–4, KS76263, KS76268, KS76270–1); 1 female, 2 juv., The Clear Place, 31°30’S, 159°04’E (QM S64112); 1 male, The Saddle, Erskine Valley, 31°34’49”S, 159°04’58”E (AM KS76190); 1 male, track to Erskine Valley, opposite Salmon Beach, 31°33’39”S, 159°04’31”E (AM KS79106); 1 male, 1 female, trail through Erskine Valley, 31°34’37”S, 159°04’33”E (AM KS76170, KS76175); 1 male, 1 female, trail to Mt Gower, 31°35’08”S, 159°04’45”E (AM KS76213); 2 males, 3 females, trail to Mt Gower, 31°35’06”S, 159°04’45”E (AM KS76208, KS76211, KS79101); 9 males, trail to Mt Gower, 31°35’12”S, 159°04’35”E (AM KS76218–9, KS76223, KS76227, KS79100); 1 female, Transit Hill, south slope, 31°30’S, 159°04’E (QM S64111); 1 male, 1 female, Valley of the Shadows bird colony, 31°31’50”S, 159°04’36”E (AM KS82432, KS82447); 1 male, 1 female, W slope of Malabar Ridge, S of Kims Lookout, 31°30’57”S, 159°03’31”E (AM KS75899, KS75902); 1 female, W slope of Transit Hill, 31°32’05”S, 159°02’24”E (AM KS75942); 1 male, western edge Golf Course, left side of clearing, 31°33’11”S, 159°05’01”E (AM KS126396).

Diagnosis. *Artoria gloriosa* is similar to *A. albopilata*; however, the tegular apophysis of the male pedipalp of *A. gloriosa* lacks the apical lower tip present in *A. albopilata*. The tip of the embolus of *A. gloriosa* is blunt (Fig. 46E), whereas it is sharp and sickle-shaped in *A. albopilata* (Fig. 46F). The median septum of the female epigyne of *A. gloriosa* does not fill out the whole atrium as in *A. albopilata* (Fig. 3G) but is truncated anteriorly (Fig. 20G).

Description. *Artoria gloriosa* has been described in detail (Framenau 2005). A diagnosis and diagnostic images (Figs 20A–H, 21, 46E) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria gloriosa* is a forest species dwelling in litter in a variety of forest types on Lord Howe Island. Mature males and females have largely been found between November and February, with two records of males from May and a fe-

Figure 20. *Aroria gloriosa* (Rainbow, 1920), male and female (AM KS84008): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

male with spiderlings in July. Two females with spiderlings were found in December.

Distribution. *Artoria gloriosa* is endemic to Lord Howe Island (PSI – Pacific Subtropical Island IBRA region) (Fig. 21) and currently the only *Artoria* species known from that island group.

Artoria grahammilledgei sp. n.

http://zoobank.org/9295A396-9544-4C0C-A116-C0FA9B4DE8AB

Figs 22A–H, 23, 47J

Graham's Forest Runner

Material examined. Holotype male, Awabakal Nature Reserve, 120 m off Redhead Road and 1 km S of Dudley (32°59'44"S, 151°42'58"S, New South Wales, AUSTRALIA], 22 June–1 July 2012, J.R. Gollan, M.A. Ashcroft, pitfall trap, under tree canopy (AM KS127756). Paratypes: 1 male, same data as holotype (AM KS122652); 4 males, 1 female, Gordon, E traps (33°44'S, 151°09'E, New South Wales, AUSTRALIA), 18 July 1982, C. Horseman, pitfall trap (AM KS9756); 21 males, 3 females, Gordon (33°44'S, 151°09'E, New South Wales, AUSTRALIA), 29 July – 26 August 1982, C. Horseman, pitfall trap (AM KS9788); 1 male, 1 female, same data (ZSMH A0002167).

Other material examined. 378 males, 147 females (1 with eggsac, 7 with spiderlings) and 32 juveniles in 184 records (all NSW). **AUSTRALIA** : **New South Wales:** 1 male, 4 km SW of Mt Vincen, approx. 10 m

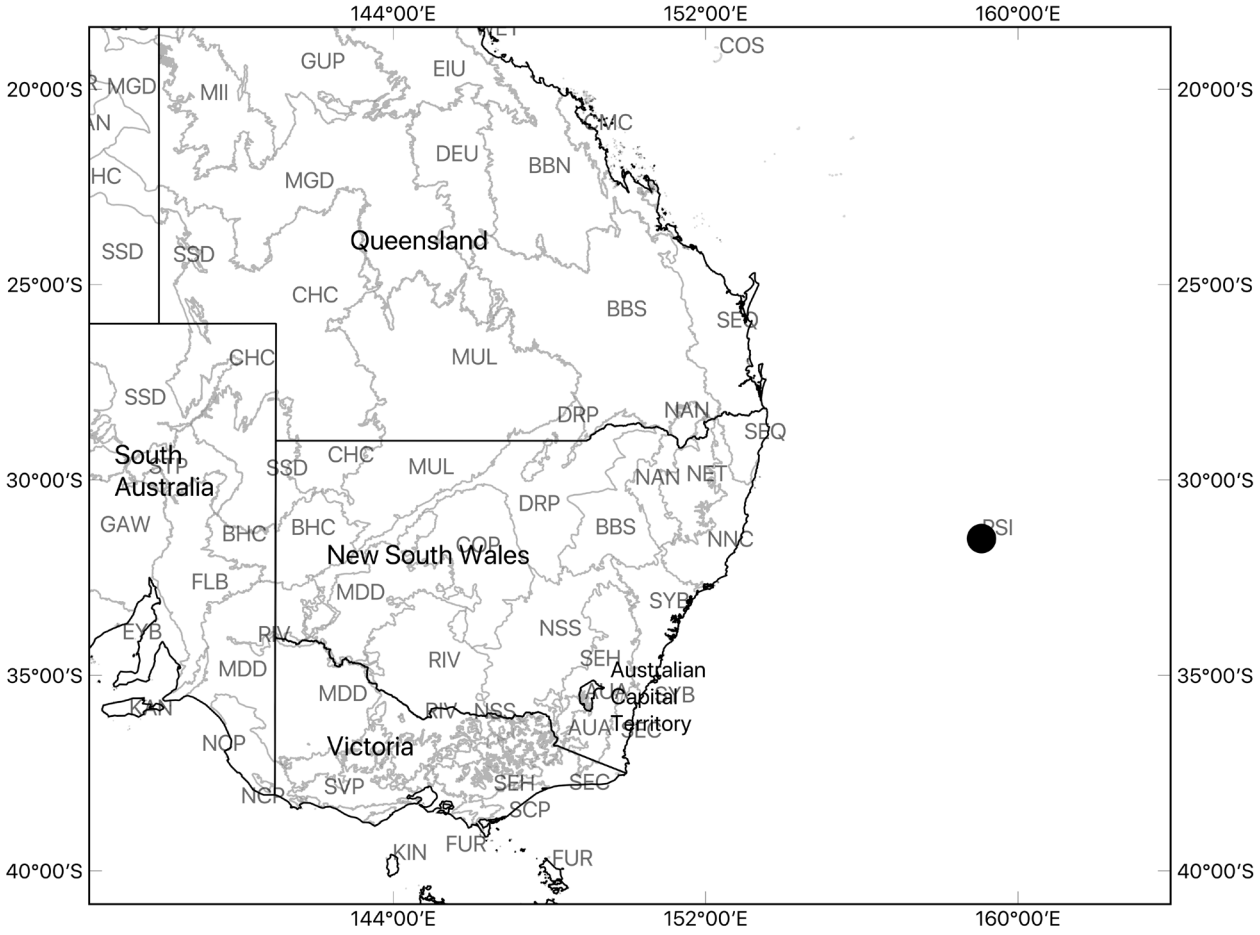

Figure 21. Distribution records of *Artoria gloriosa* (Rainbow, 1920) (full circle) in NSW. IBRA bioregions with spider records: PSI – Pacific Subtropical Islands.

from creek, 32°55’41”S, 151°26’30”E (AM KS122418); 2 males, Awabakal Nature Reserve, 120 m off Redhead Road and 1 km S of Dudley, 32°59’44”S, 151°42’58”E (AM KS122652); 8 females, Beecroft, 33°45’S, 151°04’E (AM KS53675–6, KS54490, KS63747, KS79731, KS79762, KS84293, KS86816); 7 males, 3 females, Benandarah State Forest, 8 km N of Batemans Bay, 35°40’S, 150°14’E (AM KS1937, KS2990, KS3129, KS3368, KS86532, KS86534); 1 male, Bondi State Forest, S of Bombala, 37°08’S, 149°9’E (AM KS18005); 1 female, Boorook State Forest, 1 km NW Boorook Creek junction on Conlongan Road, midway between Boorook Creek and Gilcurry Creek on Conlongan Road, 28°51’24”S, 152°11’27”E (AM KS36986); 2 males, Booti Booti National Park, 200 m from end of Cape Hawke Drive, 32°12’59”S, 152°33’41”E (AM KS122834); 2 males, Booti Booti National Park, 80 m off The Lakes Way and 4 km SE of Green Point, 32°17’04”S, 152°31’23”E (AM KS122625); 6 males, 1 female, Booti Booti National Park, 120 m off The Lakes Way and 300 m SW of Booti Booti, 32°18’40”S, 152°30’49”E (AM KS122627); 1 female, Buckenbowra State Forest, junction of No Name and Cabbage Tree Fire Trails, 35°37’41”S, 150°00’18”E (AM KS64208); 1 female, Bulls Ground State Forest, near Wauchope, 31°35’S, 152°41’E (AM KS43339); 2 females, Carrai State Forest, Fife’s Knob Road, 3 km from Fifes Fire Trail, 30°54’32”S, 152°22’12”E (AM KS39992); 1 female, Cherry Tree State Forest, via Mallanganee, 28°47’22”S, 152°44’23”E (QM S70056); 3 males, 1 female, Columbey National Park, 180 m off Clarence Town Road and 5 km SW of Clarence Town, 32°35’54”S, 151°43’58”E (AM KS122642); 2 females, Coolah Tops National Park, 30 m off Warung State Forest Road and 8 km SW of Cattle Creek, 31°49’12”S, 150°11’31”E (AM KS122386); 10 females, Coolangubra State Forest, Gawcool, 37°00’S, 149°22’E (AM KS73178, KS73180, KS73184, KS73189, KS73194, KS73196, KS84098); 1 male, Crommelin Research Station, Pearl Beach, 33°33’S, 151°18’E (AM KS50379); 2 males, Doyles River, 50 km NW of Taree, 31°30’43”S, 152°14’46”E (AM KS120441); 1 female, `Eaglereach` (private land), 60 m off Cooee Trail and 4 km NE of Lambs Valley, 32°32’46”S, 151°30’9”E (AM KS122877); 1 female, Enfield State Forest, Dodds Fire Trail, 31°23’57”S, 151°52’39”E (AM KS39724); 1 female, Enfield State Forest, Mummel Forest Road, 31°17’00”S, 151°51’17”E (AM S39722); 2 females, Gladstone State Forest, Reids

Creek Road, 30°31’01”S, 152°48’29”E (AM KS61098); 160 males, 35 females, 2 juv., Gordon, 33°44’S, 151°09’E (AM KS9746, KS9756, KS9801, KS10117, KS10268, KS10451, KS10466, KS10568, KS10587, KS12374, KS12402, KS12415, KS12640, KS13289, KS13479, KS13565, KS14394, KS14405, KS14747); 1 female, Greenacre, 33°55’S, 151°03’E (AM KS50197); 1 female, Harrington, 3–5 km NE, 31°52’S, 152°42’E (AM KS23426); 1 male, Hazelbrook Winbourne Road, 33°43’20”S, 150°27’35”E (AM KS86533); 1 male, Hornsby, Clovelly Road, 33°42’49”S, 151°05’22”E (AM KS72926); 2 females, Hornsby, Waitara Creek, 33°42’52”S, 151°05’22”E (AM KS68249, KS79602); 2 female, 5 juv., Iluka, 29°24’S, 153°22’E (AM KS12668–9); 1 male, Jamberoo Mountain, 34°40’S, 150°43’E (AM KS54477); 4 females, Jamieson Park, Narrabeen, 33°43’S, 151°18’E (AM KS44504, KS44885, KS49616); 3 male, 2 juv., Jenolan Caves area Southern Limestone Area, 33°49’S, 150°02’E (AM KS22540, KS86530); 9 males, 2 females, Kiwarrak State Forest, nr Taree, 31°58’S, 152°26’E (AM KS3900, KS3958); 2 females, Kunderang Station Creek, SW branch, 30°48’32”S, 152°06’44”E (AM KS39711); 1 male, Mount Colah, Heaney Close, 33°39’45”S, 151°07’11”E (AM KS115752); 8 males, 2.5 km E of Laguna and 40 m from track, private land, 32°59’44”S, 151°9’14”E (AM KS122406); 32 males, 11 females, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04’30”S, 149°28’00”E (AM KS99449, KS99452, KS99481, KS99483, KS99485, KS99488, KS99491, KS99493, KS99495, KS99497, KS99499–515, KS99517–25, KS99527); 17 males, 1 female, 4 km NE of Mt Wog Wog , 17 km SE of Bombala, 37°04’S, 149°28’E (AM KS99475–6, KS99477–80, KS99482, KS99484, KS99486–7, KS99489–90, KS99492, KS99494, KS99496, KS99498, KS99526, KS99528); 1 male, Myall Lakes National Park, 50 m off The Lakes Way and 2 km E of Boolambayte, 32°24’24”S, 152°17’56”E (AM KS122634); 1 male, 1 female, 15 juv., Nadgee Nature Reserve, 37°22’S, 149°55’E (AM KS1294, KS1606); 1 female, North Bondi, 33°53’S, 151°17’E (AM KS50198); 2 females, Oxley Wild Rivers National Park, East Kunderang Track, 30°48’25”S, 152°07’09”E (AM KS124727, KS124747); 1 female, Oxley Wild Rivers National Park, 57 km SE of Armidale, East Kunderang Road, 30°49’18”S, 152°02’10”S (AM KS124303); 16 males, 4 females, Pacific Palms, 32°31’S, 152°31’E (AM KS52387–90); 1 female, Parriwi Park, Mosman, 33°50’S, 151°15’E (AM KS49487); 1 female, 1 juv., Paynes Crossing `Wirraminna` ,via Wollombi, beside Werong Creek, near homestead, 32°55’S, 151°00’E (AM KS23061); 3 males, Putty State Forest; approx. 30 m from road,, 32°42’49”S, 150°37’34”E (AM KS122394); 1 male, Putty State Forest; approx. 80 m from Hunter Main Trail and just past ‘3 Ways’, 32°45’26”S, 150°33’45”E (AM KS122393); 1 female, Ramornie State Forest, track off T Ridge Road, 29°43’00”S, 152°33’23”E (AM KS39723); 2 females, Sharpers Creek, Boundary Road, N of Sharpers Road, Nerong State Forest, 32°31’37”S, 152°07’00”E (AM KS39965); 1 female, Sirius & Horseshoe Roads junction, 0.7 km NW, 30°29’12”S, 152°35’30”E (AM KS70106); 1 female, Styx River State Forest, off Cunnawarra Trail, about 2 km N Cunnawarra Creek, 30°32’49”S, 152°20’16”E (AM KS35650); 1 female, Taylor Road, between Tapley and Oliver Roads, E of Narara, 33°24’07”S, 151°23’08”E (AM KS63290); 6 males, 13 females, 1 juv., Terania Creek, N of Lismore, 28°34’S, 153°19’E (AM KS10350, KS10352, KS10354–6, KS10357, KS10359–62, KS10364–5); 3 females, 4 juv., Wahroonga, Fox Valley, 33°44’S, 151°06’E (AM KS5616); 1 male, 1 female, Wahroonga, Sydney, 33°42’S, 151°08’E (QM S70048); 5 males, Werakata National Park, 10 m from creek and 1 km SE of Kearsley, 32°51’51”S, 151°24’03”E (AM KS122422); 4 males, Werakata National Park, approx. 250 m from Neath Road, 32°49’55”S, 151°25’06”E (AM KS122420); 1 female, Werrikimbe National Park: Kangaroo Flat, 31°10’23”S, 152°9’45”E (AM KS120953); 2 males, Wollemi National Park, 2 km E of Glen Davis, 33°07’14”S, 150°18’9”E (AM KS122465); 1 male, 1 female, Wollemi National Park, approx. 150 m from Putty Road., 33°14’18”S, 150°38’46”E (AM KS122389); 16 males, 2 females, Wombeyan Caves area, 34°18’S, 149°58’E (AM KS27994, KS27999; WAM T56225); 9 males, Wombeyan Caves area, hillside N of camping ground, 34°19’S, 149°59’E (AM KS86529, KS86531); 11 males, 1 juv., Wombeyan Caves area, N of campsite, 34°19’S, 149°59’E (AM KS29657, KS86410); 2 males, Wyrrabalong National Park, 30 m off Pelican Beach Road and 30 m E of Magenta, 33°17’32”S, 151°32’56”E (AM KS122656); 1 male,1 female, Yabbra Scrub, Yabbra State Forest, 28°38’S, 152°30’E (AM KS44823, KS128790); 2 males, Yengo National Park, approx. 80 m from Putty Road, 33°02’36”S, 150°40’58”E (AM KS122391).

Etymology. Species name is a patronym in honour of Mr Graham Milledge, the Collection Manager of the Australian Museum, Sydney, for his support of this and many other of the present authors’ studies on Australian spiders.

Diagnosis. Males of *Artoria grahammilledgei* sp. n. are most similar to those of *A. terania* sp. n., but the tegular apophysis of *Artoria grahammilledgei* sp. n. is lobed apically (Fig. 22I) (while not as elongated as in *A. slatyeri* sp. n. (Fig. 36C)), whereas it is truncated in *A. terania* sp. n. (Fig. 39E). The epigyne’s atrium is almost rectangular about as wide as long with two concave lateral edges and huge spermathecae (Fig. 22G, H).

Description. Male (based on holotype, AM KS127756).

Total length 5.8.

Prosoma. Length 3.3, width 2.5; carapace light yellow-brown with dark radial pattern and black V-shaped pattern between cephalic and thoracic region; indistinct and irregular broad lighter central band (Fig. 22A); sternum pale, margin dusted dark grey (Fig. 22B).

Eyes. Diameter of AME: 0.14; ALE: 0.13; PME: 0.41; PLE: 0.32.

Anterior eye row. Slightly procurved, evenly spaced.

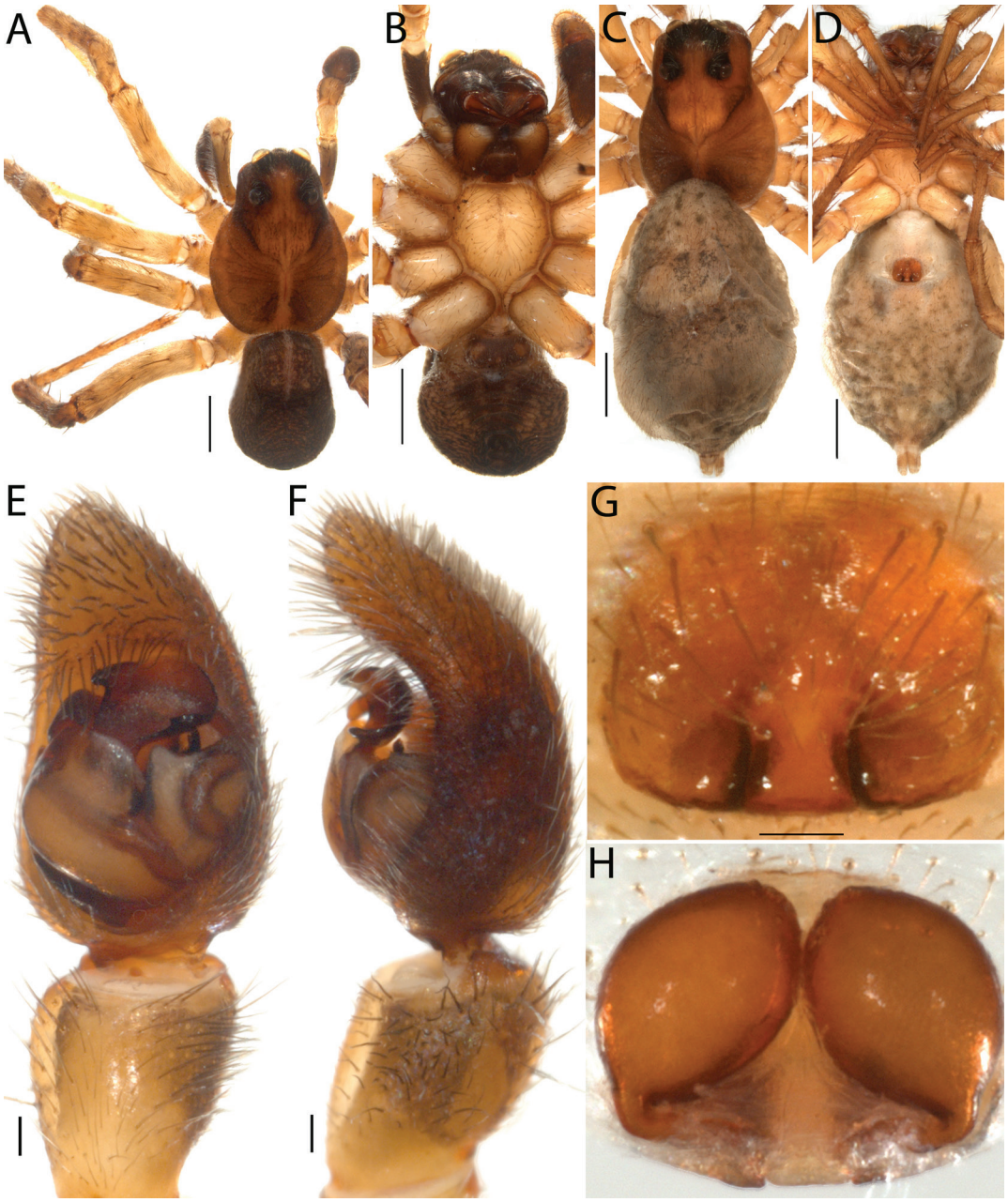

Figure 22. *Artoria grahammilledgei* sp. n., male holotype (AM KS127756), female paratype (AM KS9756): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; palp, epigyne 0.1 mm.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 22B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 22B).

Legs. Light yellow brown with slightly darker annulations. (Fig. 22A).

Opisthosoma. Length 2.5, width 1.8; dark grey with light anterior cardiac mark and light grey irregular pattern mainly in anterior half (Fig. 22A). Venter dark grey with lighter pattern laterally (Fig. 22B); spinnerets dark grey.

Pedipalps. Tibia longer than broad; cymbium tip without macrosetae (Fig. 22E, F); dorsal scopula patch present; tegular apophysis distally widely scooped, basally narrowed to 1/2, pro- and retrolateral tip pointed not reaching margin of cymbium (Fig. 22E); palea about twice as long as wide; basoembolic apophysis triangular, about as long as broad; embolus, widely semicircular; terminal apophysis broad, deeply indented tips rounded (Fig. 47J).

Female (based on AM KS9756).

Total length 6.9.

Prosoma. Length 2.8, width 2.0; carapace and sternum colouration as male (Fig. 22C, D).

Eyes. Diameter of AME 0.12, ALE 0.14, PME 0.37, PLE 0.29.

Anterior eye row. Slightly procurved.

Chelicerae, labium, pedipalp coxae, legs and *opisthosoma*. Opisthosoma length 4.1, width 2.7; otherwise as male, but opisthosoma pattern more obscure (Fig. 22C, D).

Epigyne about as long as wide, with rectangular atrium (Fig. 22G); spermathecal heads huge, globular touching anteriorly, spermathecal stalks attached ventrally (Fig. 22H).

Life history and habitat preferences. Habitat descriptions on collection labels with *Artoria grahammilledgei* sp. n. suggest the species to be a woodland and forest dweller in litter, i.e. 'dry sclerophyll forest', '*Angophora costata* woodland ridge top', '*Eucalyptus botryoides–Allocasuarina torulosa* open forest' and 'litter & soil beneath *Casuarina*'.

Mature male *Artoria grahammilledgei* sp. n. have been found almost throughout the year, except November, February and March with two distinct activity periods in April and July. Mature females have been found in all months with a first peak from April to August, and a second in November. A female with eggsac was found in October/November and females with spiderlings in January, April, November and December. Therefore, the species appears largely autumn to winter mature, but with wide seasonal variation in relation to its reproductive behaviour.

Distribution. In NSW, *Artoria grahammilledgei* sp. n. appears common east of the Great Dividing Range but has also been found along its west (Fig. 23). The species is also known from Queensland (V.W. Framenau, unpublished data).

Artoria helensmithae sp. n.

http://zoobank.org/2E554E14-1913-49EF-8853-E0CDF2ABD877

Figs 23, 24A–H, 47K

Helen's Forest Runner

Material examined. Holotype, Booti Booti National Park, S of Forster, southern end of park (32°16'47"S, 152°31'28"E, New South Wales, AUSTRALIA), 30 September–9 October 1997, L. Wilkie, pitfall trap (AM KS128076). Paratypes: 4 males, same data as holotype (AM KS61893); 1 female, Munmorah State Recreation Area, 33°12'26"S, 151°34'37"E (AM KS61928); 7 females, Booti Booti National Park (32°14'28"S, 152°32'50"E, New South Wales, AUSTRALIA), 25 November 1997, pitfall trap, L. Wilkie, BBC02/03 (AM KS61914); 1 female, same data (ZMH A0002168); 33 males, Bungonia Caves area, near Information Centre (34°48'02"S, 150°00'57"E, New South Wales, AUSTRALIA), mid-October–mid-November 1989, G. Hunt, pitfall trap (AM KS22556); 1 male, same data (ZSMH A0002169).

Other material examined. 175 males, 100 females (2 with spiderlings) and 1 juvenile 134 records. AUSTRALIA: New South Wales: 2 males, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS98791, KS98810); 1 male, Barrington Cave Pigna Barney PB1-20, 31°46'24"S, 151°31'17"E (AM KS52386); 3 males, 1 female, Bondi State Forest, S of Bombala, 37°07'S, 149°08'E (AM KS18203–5, KS70234); 47 males, 21 females, Booti Booti National Park, 32°14'28"S, 152°32'50"E (AM KS50502–13, KS52069–70, KS61861, KS61868, KS61872, KS61875, KS61879, KS61881, KS61889, KS61892–4, KS61897–8, KS61909, KS61911–2, KS61919, KS61923, KS61927, KS61935–6, KS61978, KS64040–48); 2 males, Cherry Tree north State Forest, 28°58'S, 152°15'E (AM KS52392); 1 female, Dover Heights, Rodney Reserve, 33°52'26"S, 151°16'59"E (AM KS110534); 2 males, 6 females, 1 juv., Harrington, 3–5 km NE, 31°52'S, 152°42'E (AM KS23427); 1 male, 1 female, Munmorah State Conservation Area, 30 m off Birdie Beach Drive and 200m north of Freemans, 33°12'17"S, 151°36'9"E (AM KS122654, KS122908); 10 males, Munmorah State Recreation Area, 33°12'24"S, 151°34'59"E (AM KS61862, KS61864); 2 males, Munmorah State Recreation Area, 33°12'26"S, 151°34'37"E (AM KS61852–3); 1 female, Munmorah State Recreation Area, 33°12'27"S, 151°34'37"E (AM KS61907); 15 males, 9 females, Munmorah State Recreation Area, 33°12'34"S, 151°34'59"E (AM KS61848, KS61856, KS61876, KS61883–4, KS61896, KS61908, KS61930–31, KS61933–4, KS86380); 18 males, 1 female, Munmorah State Recreation Area, 33°13'09"S, 151°34'15"E (AM KS61859, KS61871, KS61885, KS61891, KS61903, KS64049); 1 male, 1 female, Myall Lakes National Park, 32°29'22"S, 152°23'53"E (AM KS61887, KS64051); 2 males, Myall Lakes National Park, 32°30'26"S, 152°21'55"E (AM KS61899); 2 males, 1 female, Myall Lakes National Park, 32°34'45"S, 152°17'27"E (AM KS61900, KS64052); 5 male, 2 females, Myall Lakes National Park, 32°34'45"S, 152°12'27"E (AM KS61849, KS61865, KS61873, KS61888, KS61890, KS61916); 9 male, 8 females, Myall Lakes National Park, 32°37'56"S, 152°12'27"E (AM KS61850–51, KS61855, KS61869, KS61878, KS61886, KS61906, KS61915, KS61921–2, KS61926); 4 males, 5 females, Nullica Beach, 37°06'S, 149°53'E (AM KS83713, KS83718, KS83723); 2 females, Nullica River Bridge, S of river between bridge and coast, 37°04'S, 149°48'E (WAM T56211); 1 male, Seven Mile Beach National Park, picnic area., 34°47'30"S, 150°46'44"E (AM KS119173); 2 females, Tamarama, Marks Park, 33°53'56"S, 151°16'30"E (AM KS110537); 1 female, Wallaroo State Forest, Flaggy Creek, 32°36'03"S, 151°48'07"E (AM KS39707); 9 males, 20 females, Wyrrabalong National Park, 33°16'44"S, 151°32'51"E (AM KS61854, KS61874, KS61895, KS61904, KS61917, KS61920, KS61924–5, KS64053–5); 3 male, 3 females, Wyrrabalong National Park, 33°16'47"S, 151°32'40"E (AM KS61866, KS61870, KS61880, KS61905, KS61913, KS61929); 3 males, 2 females, Wyrrabalong National Park, 33°16'48"S, 151°32'45"E (AM KS61867, KS61877, KS64057, KS64059–60); 1 male, Wyrrabalong National Park, 33°16'51"S, 151°32'37"E (AM KS64058).

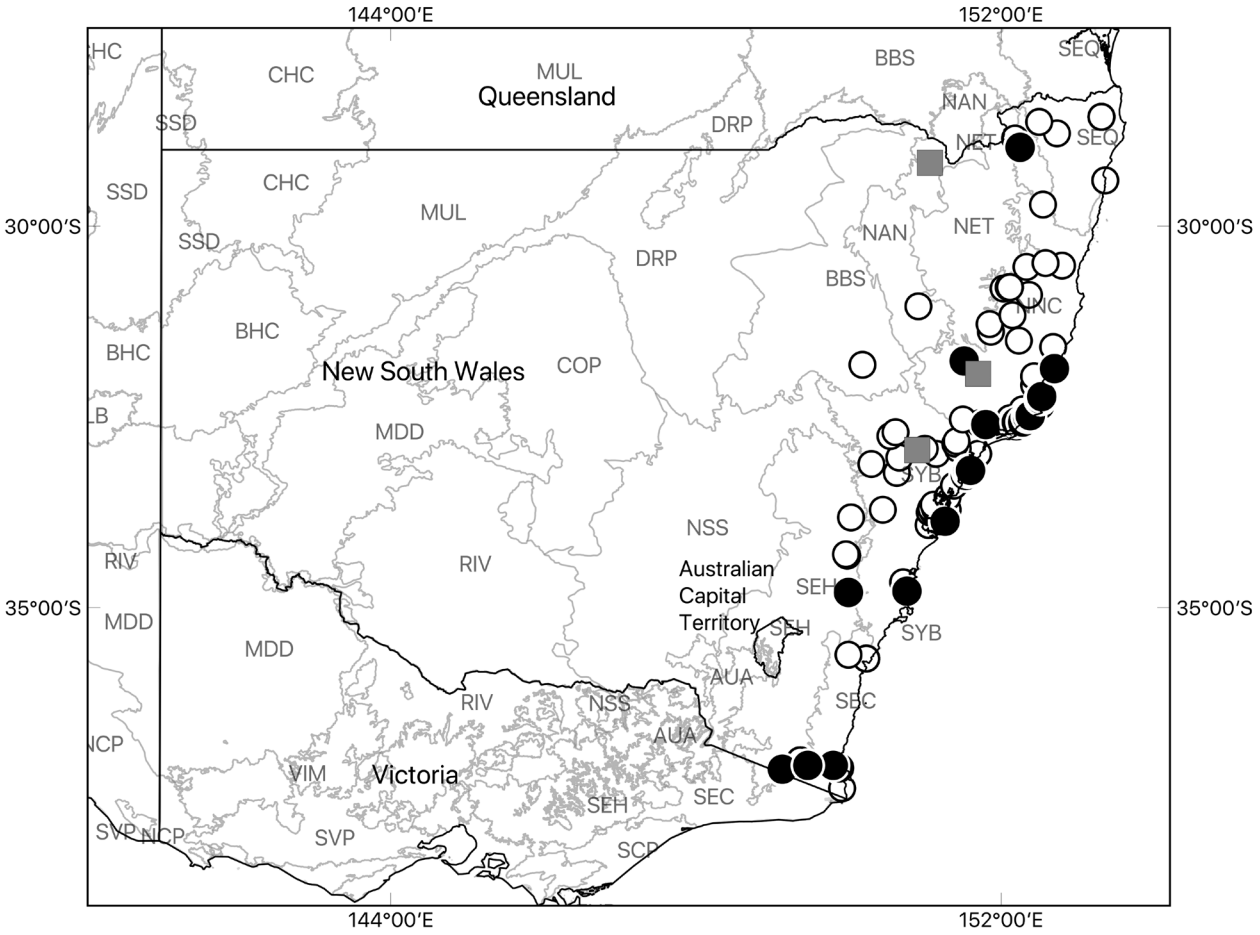

Figure 23. Distribution records of *Artoria grahammilledgei* sp. n. (open circles), *A. helensmithae* sp. n. (full circles) and *A. howquaensis* Framenau, 2002 (grey squares) in NSW. IBRA bioregions with spider records: BBS – Brigalow Belt South; NAN – Nandewar; NET – New England Tablelands; NNC – NSW North Coast; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Etymology. The specific epithet is a matronym honouring Dr Helen Smith of the Australian Museum, Sydney, for her ongoing support of our spider research.

Diagnosis. *Artoria helensmithae* sp. n. males and females are very similar to those of *A. beaury* sp. n. (see diagnosis above).

Description. Male (based on holotype, AM KS128076).

Total length 3.9.

Prosoma. Length 2.2, width 1.5; carapace light yellow-brown with dark radial pattern and black V-shaped pattern between cephalic and thoracic region; indistinct and irregular lighter central and marginal band (Fig. 24A); sternum light, margin dusted dark grey (Fig. 24B).

Eyes. Diameter of AME: 0.10; ALE: 0.07; PME: 0.28; PLE: 0.20.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Dark brown darker apically.

Labium. Dark brown, with lighter anterior rim (Fig. 24B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 24B).

Legs. Femora, tibiae and metatarsi of leg I very dark to almost black; other legs brown, with darker annulations; tarsi and metatarsi lighter brown (Fig. 24A).

Opisthosoma. Length 1.7, width 1.3; dark grey with light yellow-brown anterior cardiac mark and light irregular pattern (Fig. 24A). Venter pale with darker pattern anteriorly (Fig. 24B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with 8–10 macrosetae (Fig. 24E, F); dorsal scopula patch absent; tegular apophysis distally widely scooped, basally narrowed to 1/2, retrolateral tip strongly hooked and reaching beyond margin of cymbium (Fig. 24E, F); palea about 1 1/2 times as long as wide, basoembolic apophysis large, triangular; embolus broad, widely semicircular; terminal apophysis triangular, tip scooped (Fig. 47K).

Female (based on AM KS61928).

Total length 3.8.

Prosoma. Length 2.2, width 1.6; carapace and sternum colouration as male (Fig. 24C, D).

Eyes. Diameter of AME 0.08, ALE 0.08, PME 0.26, PLE 0.19.

Anterior eye row. Slightly procurved, evenly spaced.

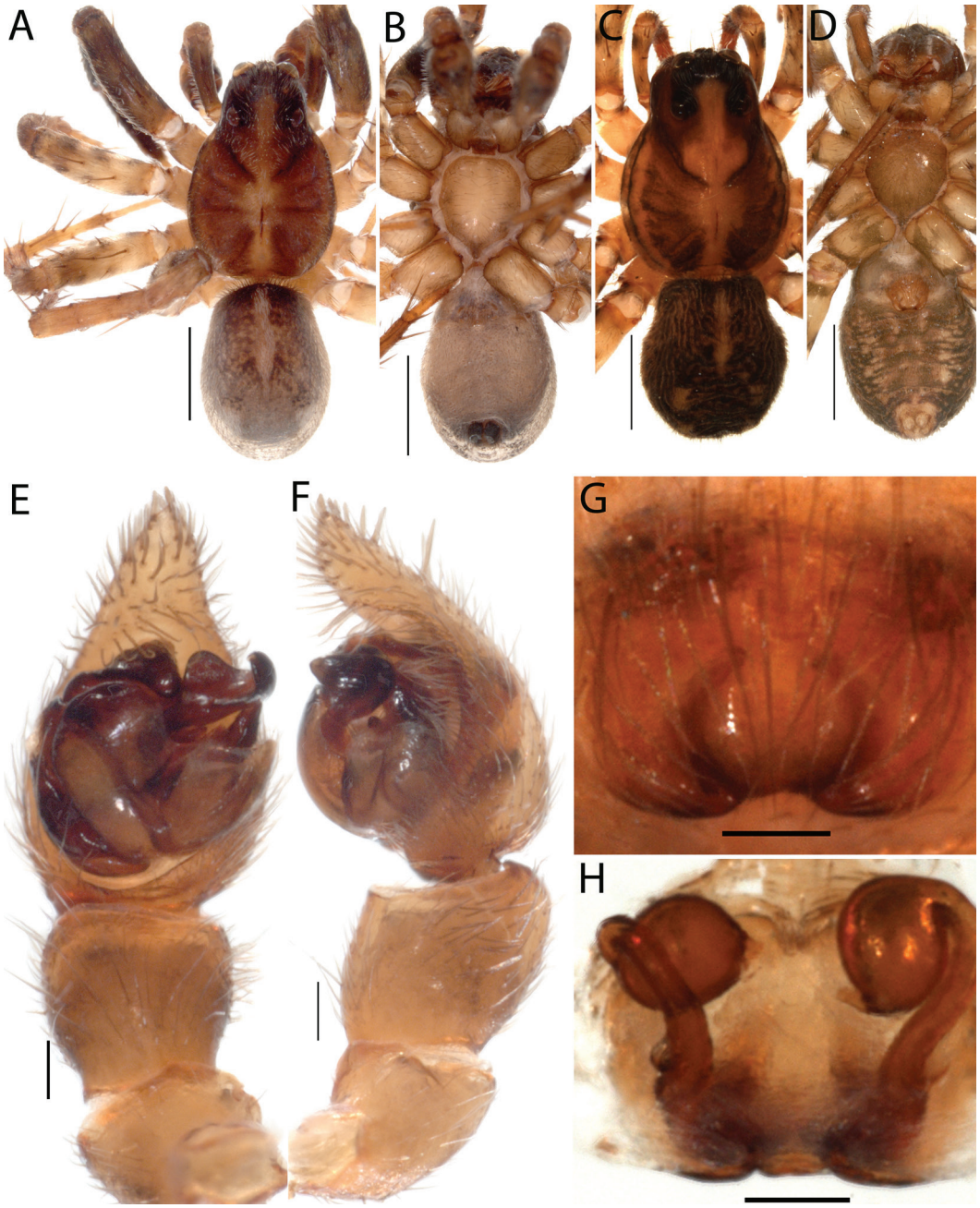

Figure 24. *A helensmithae* sp. n.**,** male holotype (AM KS128076), female paratype (AM KS61928): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Opisthosoma. Length 1.6, width 1.5; otherwise as male, but legs I not darker and opisthosoma pattern more obscure (Fig. 24C, D).

Epigyne about slightly longer than wide, strongly sclerotized at posterior tips (Fig. 24G); spermathecal heads globular around 1 diameter apart, spermathecal stalks attached laterally slightly s-shaped (Fig. 24H).

Life history and habitat preferences. Habitat descriptions found on the collection labels of *A. helensmithae* sp. n. include ‘under tall shrubs’, ‘sand dunes’, open forest, litter’, ‘rainforest’ and ‘dry forest’. A single record is from the dark zone of a cave. Therefore, *A. helensmithae* sp. n. seems to show some variation in its habitat preferences. Most records also state ‘litter’.

Artoria helensmithae sp. n. appears to have three peaks of reproductive activity, the first around April/May, then in July and again from October to December. Females with spiderlings were found in December. This is an unusual phenology for wolf spiders, i.e. this species appears to be reproductively active in autumn, winter and summer.

Distribution. In NSW, *A. helensmithae* sp. n. has generally been found east of the Great Dividing Range, with records from the NSW North Coast (NNC), Sydney

Basin (SYB), South East Corner (SEC) and South East Highlands (SHE) IBRA regions (Fig. 23). The species has also been found in eastern and central Victoria (V.W. Framenau, unpublished data).

Artoria howquaensis Framenau, 2002

Figs 23, 25A–H, 46J

Howqua River Artoria

Artoria howquaensis Framenau, 2002: 217–218, figs 9A–G, 10; Framenau et al. 2006: 28, figs 59–61.

Material examined. Holotype male, Howqua River at Mansfield–Woods Point Road Bridge (37°13'S 146°10'E, Victoria), 11 February 1998, riparian gravel bank, V. W. Framenau (NMV K7467). Paratypes: 8 males, 5 females, data as holotype (NMV K7468) (examined).

Other material examined. 7 males and 1 female in 3 records (all NSW). **AUSTRALIA: New South Wales:** 3 males, 1 female, Private land 'Camp Cobark', 80 m off Scone Road and 3 km SE of Cobark, 31°56'05"S, 151°42'27"E (AM KS122802); 1 male, Severn State Forest, 25 km NNW of Ashford, 8 km along Appletree Road, 29°10'12"S, 151°04'23"E (AM KS82788); 3 males, Yengo National Park, approx. 40 m from track, 32°56'46"S, 150°54'33"E (AM KS122271).

Diagnosis. Amongst Australian *Artoria*, *A. howquaensis* is most similar to *A. parvula*, a tropical species not yet found in NSW or the ACT. This species most easily diagnosed by its body colouration, being very dark brown to black with distinct white lateral bands on the carapace (Fig. 25A, B), this colour pattern being more distinct in live specimens. The tegular apophysis is similar to those of the *booderee*-group (i.e. two-lobed), but in contrast to those species, the basal lobe is pointy (not rounded) and directed ventrally (Fig. 25E). The epigyne is poorly sclerotised with the Y-shaped internal genitalia visible through the cuticle (Fig. 25G, H).

Description. *Artoria howquaensis* has been described in detail (Framenau 2002; Framenau et al. 2006). A diagnosis and diagnostic images (Figs 25A–H, 46J) are provided here to facilitate identification, in particular from similar newly-described species.

Life history and habitat preferences. *Artoria howquaensis* is a riparian species which has previously been found in open habitats along the margins of rivers and springs. The records in NSW are consistent with this habitat preference as the species was found in open, grassy and swampy areas.

Mature males and females were found in December, with further records of males in March.

Distribution. In NSW, *A. howquaensis* has been found in scattered records in the northern half of the state east and west of the Great Dividing Range in the Nandewar (NAN), NSW North Coast (NNC) and Sydney Basin (SYB) bioregion (Fig. 23). The species is likely more widespread in the state, but riparian habitats are rarely sampled. The species is known to occur throughout Victoria and South Australia (Framenau 2002; 2005; Framenau et al. 2006).

Artoria kanangra sp. n.

http://zoobank.org/50081469-9165-48A8-A98F-1397F79D8671

Figs 2C, 26A–D, 27, 47L

Kanangra Forest Runner

Material examined. Holotype male, Kanangra-Boyd National Park, Boyd River (34°03'S, 150°05'E, New South Wales, AUSTRALIA), 26 November 1994, D. Bickel, pans, 1200 m, creek sphagnum (AM KS45008).

Other material examined. AUSTRALIA: New South Wales: 1 male, Barren Grounds Nature Reserve, 14 km NW Jamberoo, Illawarra Escarpment, 34°40'28"S, 150°42'45"E (AM KS63088).

Etymology. The specific epithet is a noun in apposition referring to the type locality, Kanangra-Boyd National Park.

Diagnosis. Males of *A. kanangra* sp. n. are most similar to those of the *booderee*-group (*A. booderee* sp. n., *A. corowa* sp. n., *A. munmorah* sp. n. and *A. equipalus* sp. n.), but differ in the shape of the tegular apophysis, which is birdhead-shaped in *A. kanangra* sp. n. (Fig. 26C).

Description. Male (based on holotype, AM KS45008). Total length 4.5.

Prosoma. Length 2.4, width 1.7; carapace yellow-brown dusted with grey and indistinct dark radial pattern; lateral margin and central band pale yellow, broader in cephalic area, constricted halfway between cephalic area and fovea (Fig. 26A); sternum yellow-brown, dusted dark grey (Fig. 26B).

Eyes (Fig. 2C). Diameter of AME: 0.09; ALE: 0.11; PME: 0.29; PLE: 0.23.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 26B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 26B).

Legs. Femora and tibiae of leg I very dark; other legs brown, femora and tibia with darker annulations, particularly ventrally; tarsi and metatarsi lighter yellow-brown (Fig. 26A).

Opisthosoma. Length 2.1, width 1.4; cinnamon-brown with light anterior cardiac mark and dark grey irregular pattern (Fig. 26A). Venter cinnamon with darker pattern (Fig. 26B); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; cymbium tip with cluster of macrosetae (Fig. 26C, D); dorsal scopula patch present; tegular apophysis distally birdhead-shaped, basally narrowed to 1/3, retrolateral tip pointed not reaching margin of cymbium (Fig. 26C); palea about 1 1/2 times as long as wide; basoembolic apophysis about as long as broad, triangular; embolus widely semicircular; terminal apophysis broad (Fig. 47L).

Female unknown.

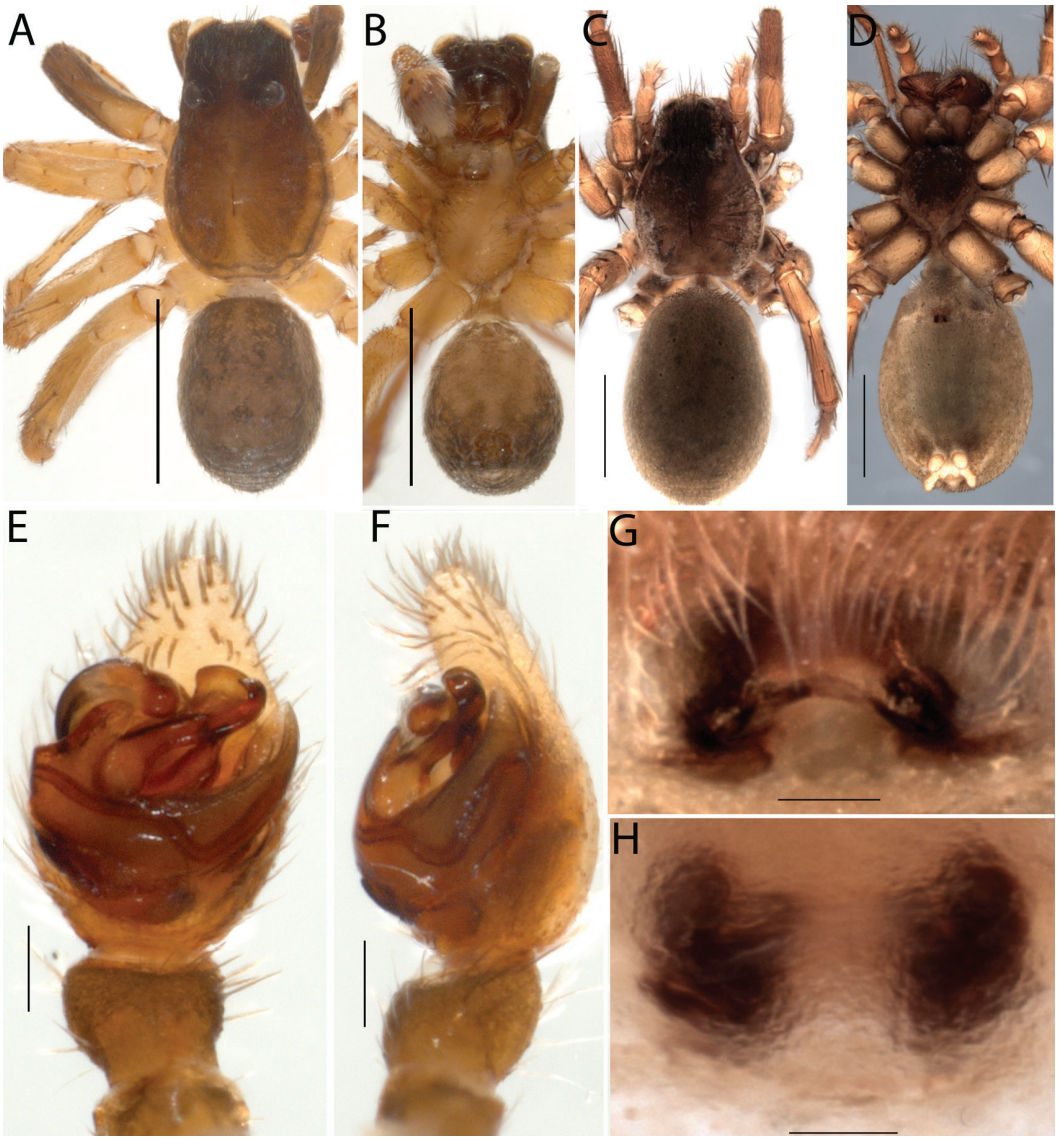

Figure 25. *Artoria howquaensis* Framenau, 2002, male (AM KS82788), female (WAM T55414): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Life history and habitat preferences. The holotype was found in creek sphagnum at 1,200 m altitude suggesting the species to be riparian. Adult males were found in August and December.

Distribution. *Artoria kanangra* sp. n. is currently known only from two localities in eastern-central NSW, from the Sydney Basin (SYB) and South Eastern Highlands (SHE) IBRA bioregions (Fig. 27).

Artoria kerewong sp. n.

http://zoobank.org/A9D37CCB-046B-4070-96D5-09A4EBEFD6EB

Figs 26E–H, 27, 48A

Kerewong Forest Runner

Material examined. Holotype male, Kerewong State Forest, near Lorne (31°36'S, 152°34'E, New South Wales, AUSTRALIA], 20 November 1978, D. Milledge, pitfall trap site 108(3), FN1561 (AM KS16162).

Other material examined. Known only from type material.

Etymology. The specific epithet is a noun in apposition referring to the type locality, Kerewong State Forest.

Diagnosis. The pedipalp morphology of males of *A. kerewong* sp. n. is distinct within the genus, with the terminal section of the tegular apophysis having both a pointed apical and a pointed basal tip. The basoembolic apophysis is the longest amongst the known *Artoria* species. The female of *A. kerewong* sp. n. is currently unknown.

Description.

Male (based on holotype, AM KS16162).

Total length 4.6.

Prosoma. Length 2.6, width 1.9; carapace dark grey; with distinct broad lighter marginal band and

Figure 26. A–D, *Artoria kanangra* sp. n., male holotype (AM KS45008), **E–H**, *A. kerewong* sp. n., male holotype (AM KS16162): **A**, habitus, dorsal view; **B**, habitus, ventral view; **C**, male pedipalp, ventral view; **D**, male pedipalp, retrolateral view; **E**, habitus, dorsal view; **F**, habitus, ventral view; **G**, male pedipalp, ventral view; **H**, male pedipalp, retrolateral view. Scale bars: habitus 1.0 mm; pedipalp 0.1 mm

broad lighter central band, constricted at posterior 1/3 (Fig. 26E); sternum light brown, slightly dusted grey (Fig. 26F).

Eyes. Diameter of AME: 0.11; ALE: 0.12; PME: 0.29; PLE: 0.20.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Medium brown darker apically.

Labium. Dark brown, with lighter anterior rim (Fig. 26F).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 26F).

Legs. Yellow brown with darker annulations; metatarsi and tarsi darker, less annulated (Fig. 26E).

Opisthosoma. Length 2.0, width 1.5; cinnamon-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 26E). Venter cinnamon with darker pattern laterally (Fig. 26F); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with distal cluster of macrosetae (Fig. 26G, H); dorsal scopula patch present but sparse; tegular apophysis with narrow stalk and bent triangular tip, tip reaching margin of cymbium, prolaterally strongly pointed (Fig. 26G); palea about twice as long as wide, basoembolic apophysis twice as long as broad, bent posteriorly and broadly rounded; embolus extremely broad, widely semicircular; terminal apophysis not visible (Fig. 48A).

Female unknown.

Life history and habitat preferences. No habitat data were on the collection label of the holotype, which was found in November/December suggesting it is summer mature.

Distribution. *Artoria kerewong* sp. n. is known only from the type locality, the Kerewong State Forest in the NSW North Coast (NNC) IBRA region (Fig. 27).

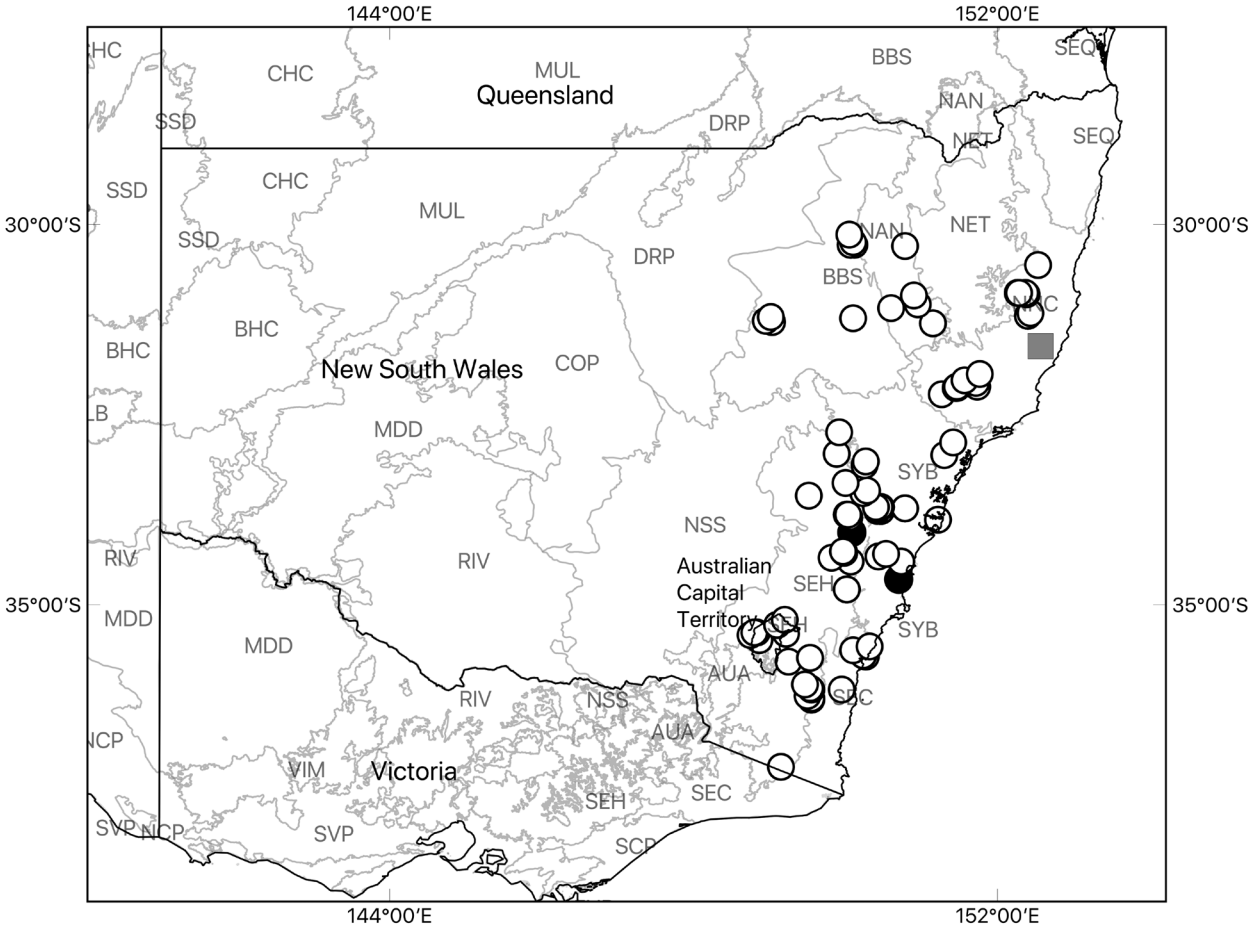

Figure 27. Distribution records of *Artoria kanangra* sp. n. (full circles), *A. kerewong* sp. n. (grey square) and *A. lineata* (L. Koch, 1877) (open circles) in NSW and ACT. IBRA bioregions with spider records: AUA – Australian Alps; BBS – Brigalow Belt South; NAN – Nandewar; NET – New England Tablelands; NNC – NSW North Coast; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Artoria lineata (L. Koch, 1877)

Figs 10A, B, E, F, 27, 28A–H, 46A

Common Forest Runner

Trabea lineata L. Koch, 1877: 970–971, pl. 84, figs 7, 7A–B.- Bonnet 1959: 4664; Rack 1961: 3.

Trabaea lineata (L. Koch).- Rainbow 1911: 275. – McKay 1973: 378.

Trabaeosa lineata (L. Koch).- Roewer 1955: 297; McKay 1985: 85.

Trabaeola lineata (L. Koch).- Roewer 1960: 582; Russell-Smith 1982: 88–89.

Artoria lineata (L. Koch).- Framenau 2002: 218–220, figs 11A–F, 12.

Material examined. Holotype male, Sydney (33°53’S, 151°13’E, New South Wales, AUSTRALIA], Museum Godeffroy Nr. 14606 (ZSMH A0000052) (examined; contra Rack (1961) who reported it as missing from the Godeffroy Collection).

Other material examined. 421 males, 135 females and 25 juveniles in 149 records (143 NSW, 6 ACT). **Australian Capital Territory:** 2 males, Black Mountain, 35°16’S, 149°06’E (ANIC); 1 female, Black Mountain, near lookout, 35°16’S, 149°06’E (ANIC); 2 females, 1 juv., Black Mountain, W slope, 35°16’S, 149°06’E (ANIC); 2 females, Blundells Creek, 3 km E of Piccadilly Circus, 35°22’S, 148°50’E (ANIC); 1 female, Tidbinbilla Nature Reserve, 35°28’S, 148°52’E (AM KS85156); 1 female, Urara to Piccadilly Circus, 35°22’S, 148°48’E (ANIC). **New South Wales:** 3 females, 1 juv., `Tuglo`, 48 km N Singleton, 32°14’S, 151°16’E (AM KS69948); 1 female, 60 m from Tonbong Road and 7 km NW of Rylstone, private land, 32°44’25”S, 149°55’43”E (AM KS122457); 3 females, 600 m NW of Running Stream and 30 m from Castlereagh Road Highway, managed by Roads and Traffic Authority, 33°01’38”S, 149°53’43”E (AM KS122472, KS122785); 1 female, Attunga State Forest, S of Ardey Range, W edge of State Forest, opposite `Tralee`, 30°56’00”S, 150°54’19”E (AM KS82812); 1 male, Badja State Forest, Badja Fire Trail, 36°06’46”S, 149°32’38”E (AM KS68640); 2 females, Badja State Forest, Badja Fire Trail, 36°07’S, 149°33’E (AM KS64408–9); 1 female, Badja State Forest, Rocky Range

Fire Trail, 36°03'S, 149°28'E (AM KS64410); 1 female, Badja State Forest, Tuross River Road, 36°12'S, 149°30'E (AM KS64412); 1 male, Bargo River, 34°20'S, 150°32'E (AM KS86686); 1 male, Barrington Tops National Park, Gloucester Tops, gate on Kerripit Road, 32°03'43"S, 151°34'39"E (AM KS102992); 1 female, Bells, 3 km E of, Bells Line Road, 33°30'S, 150°17'E (AM KS49464); 11 males, 1 juv., Benandarah State Forest, 35°40'S, 150°14'E (AM KS1747, KS1936, KS2282, KS3872, KS3935, KS4568, KS5554); 21 males, 12 females, Blue Mountains Road to Ingar Picnic Area, 33°46'S, 150°28'E (AM KS51850–56, KS51859–61, KS51862–7); 2 males, Blue Mountains Road to Ingar Picnic Area, 33°46'00"S, 150°25'45"E (AM KS53939); 1 female, Bondi State Forest, South of Bombala, Woodlot 1, 37°08'S, 149°9'E (AM KS15224); 1 female, Brindabella Ranges, Rules Point Road, 35°24'S, 148°45'E (AM KS44974); 16 males, 11 females, Bullaburra Red Gum Park, 33°43'50"S, 150°24'35"E (AM KS51835–6, KS51838–40, KS51842, KS52077–8, KS5207980); 15 males, 2 females, Bungonia, 34°48'S, 150°01'E (AM KS22742–3); 70 males, 6 female, 1 juv., Bungonia Caves Area, near Information Centre, 34°48'S, 150°01'E (AM KS22557, KS22562, KS22577, KS22602); 1 female, 1 juv., Cabbage Tree Creek, no exact locality (ANIC); 5 males, Carrai State Forest, Cochrane Road, 30°54'33"S, 152°16'28"E (AM KS120176, KS120390, KS120401); 1 female, Carrai State Forest, Fife Fire Trail, 500 m NE of Fife's Knob Road, 30°55'S, 152°23'E (AM KS39991); 1 female, 1 juv., Carrai State Forest, Fifes Knob Road, 2 km from Fifes Fire Trail, 30°54'55"S, 152°22'08"E (AM KS85155); 2 females, Carrai State Forest; Daisy Plains, 30°54'19"S, 152°17'36"E (AM KS120190, KS120204); 2 females, Chichester State Forest, 2.3 km N of Karnah River on Karnah River Road, 32°05'S, 151°43'E (AM KS40747); 1 female, Chichester State Forest, Allyn River Forest Road, 1.1 km N of Mt Allyn Road, 32°08'S, 151°28'E (AM KS39726); 1 female, Chichester State Forest, Allyn River Forest Road, 550 m S of Mt Allyn Road, 32°9'S, 151°28'E (AM KS39728); 2 females, Chichester State Forest, Mt Ally Road, 800 m N of Shellbrook Forest Road, 32°9'S, 151°27'E (AM KS39725); 1 female, Chichester State Forest, Mt Allyn Road, 300 m E of Shellbrook Forest Road, 32°9'S, 151°27'E (AM KS39727); 1 female, Copeland Tops State Conservation Area, 50 m off Barrington Tops Road, 31°58'30"S, 151°46'40"E (AM KS122808); 2 females, Cow Flat, S of Bathurst, woodland immediate S of marble quarry, 33°34'S, 149°31'E (AM KS29947); 2 females, Crown Reserve, 0.9 km along road to Woolomin rubbish tip, 31°18'05"S, 151°9'20"E (AM KS82814, KS82818); 1 female, 1 juv., Currowan State Forest, 35°36'S, 150°06'E (ANIC); 1 male, Dampier State Forest, Nerrigunday Mount Road, 36°07'51"S, 149°57'32"E (AM KS68636); 1 female, Federal Highway on NSW/ACT border, 35°12'S, 149°12'E (AM KS49458); 1 male, Hartley Vale, old cemetery, 33°32'S, 150°14'E (AM KS65726); 9 males, 2 females, Hazelbrook, Coates Park, 33°44'S, 150°47'E (AM KS53785–8); 4 males, Hazelbrook, Railway Parade, 33°43'55"S, 150°27'00"E (AM KS52074, KS52076); 35 males, 3 female, 1 juv., Jenolan Caves area, playing field, 33°49'S, 150°01'E (AM KS2165, KS225109); 103 males, 2 females, 1 juv., Jenolan Caves area, southern limestone area, 33°49'S, 150°01'E (AM KS21673, KS22530); 7 females, 6 juv., Jerrabomberra Hill near Queanbeyan, 35°23'S, 149°13'E (ANIC); 1 female, 1 juv., Kanangra-Boyd National Park, 33°51'S, 150°03'E (AM KS29873); 1 female, Kioloa State Forest, T-Ridge Road, 35°33'S, 150°19'E (AM KS64411); 18 males, 2 females, Mount Kembla, Sydney Catchment Authority Reserve, 34°26'33"S, 150°44'24"E (AM KS63024, KS63044, KS63052, KS63058, KS63061, KS63519, KS70036); 5 females, Mountain Road, 0.2 km S of junction with Kunungra Road, 32°08'S, 151°44'E (AM KS40746); 2 males, 1 juv., Mt Boss State Forest (Camp), 31°12'S, 152°24'E (AM KS42867); 14 males, 4 females, Mt Boss State Forest (Cock), 31°12'S, 152°24'E (AM KS42842); 8 males, 1 female, Mt Boss State Forest (Fenwicks), 31°12'S, 152°24'E (AM KS42874–5); 14 males, Mt Boss State Forest (Kota), 31°12'S, 152°24'E (AM KS43565, KS99788); 39 males, 3 females, Mt Boss State Forest (Thumb), 31°12'S, 152°24'E (AM KS43532, KS43538); 2 males, Mt Boss State Forest, Banda Banda Beech Reserve, NW Wauchope, 31°10'S, 152°26'E (AM KS42828); 1 female, Mt Flora, near Mittagong, 34°22'S, 150°26'E (ANIC); 1 female, 6 juv., Mt Jerrabombera, Queanbeyan, 35°23'S, 149°13'E (ANIC); 1 female, Mt Kaputar National Park, 1.5k m W of Kilarney Gap, 30°08'31"S, 150°03'39"E (AM KS82817); 1 females, Mt Kaputar National Park, 600 m below end of Bullawa Creek Road, 31°14'19"S, 150°06'17"E (AM KS82813, KS82816); 1 male, 2 females, Mt Kaputar National Park, base of N side of Mt Yulludunida, 30°16'54"S, 150°04'58"E (AM KS82819, KS82852); 1 male, Mt Kaputar National Park, N side of Mt Coryah, road to Mt Kaputar, 30°16'36"S, 150°07'02"E (AM KS82860); 1 male, Mt Killiekrankie, 30°32'30"S, 152°32'30"E (AM KS70112); 1 female, Murramarang National Park, Junction of Carls Mountain and North Heads Road, 35°41'S, 150°16'E (AM KS64413); 1 female, Newnes Plateau, 33°10'S, 150°15'E (AM KS16965); 1 female, Oaky Creek Nature Reserve, ridge on NE side of Figtree Mt, 31°06'11"S, 150°36'52"E (AM KS82820); 1 female, Slaven Cave, Doline via Wellarawong, 33°24'S, 150°00'E (AM KS45493); 1 male, 4 females, Tallaganda State Forest, South Forest Way, 35°42'07"S, 149°32'31"E (AM KS68639, KS68643); 1 female, Tamworth, 2 km from, on Tintinhull Road, 31°03'34"S, 150°57'05"E (AM KS82821); 2 females, Taralga, 13 km NNE, 34°23'S, 149°49'E (ANIC); 1 female, Tinderry Range, 8.5 km ESE Michelago, 35°45'S, 149°15'E (ANIC); 1 female, TSR, Barraba-Bundarra Road, 500 m N of Ironbark Creek crossing, 30°17'42"S, 150°47'36"E (AM KS82815); 1 female, Wadbilliga National Park, Bumberry Creek Fire Trail, 36°14'20"S, 149°33'36"E (AM KS64403); 1 female, Warrumbungle National Park, 31°13'S, 149°01'E

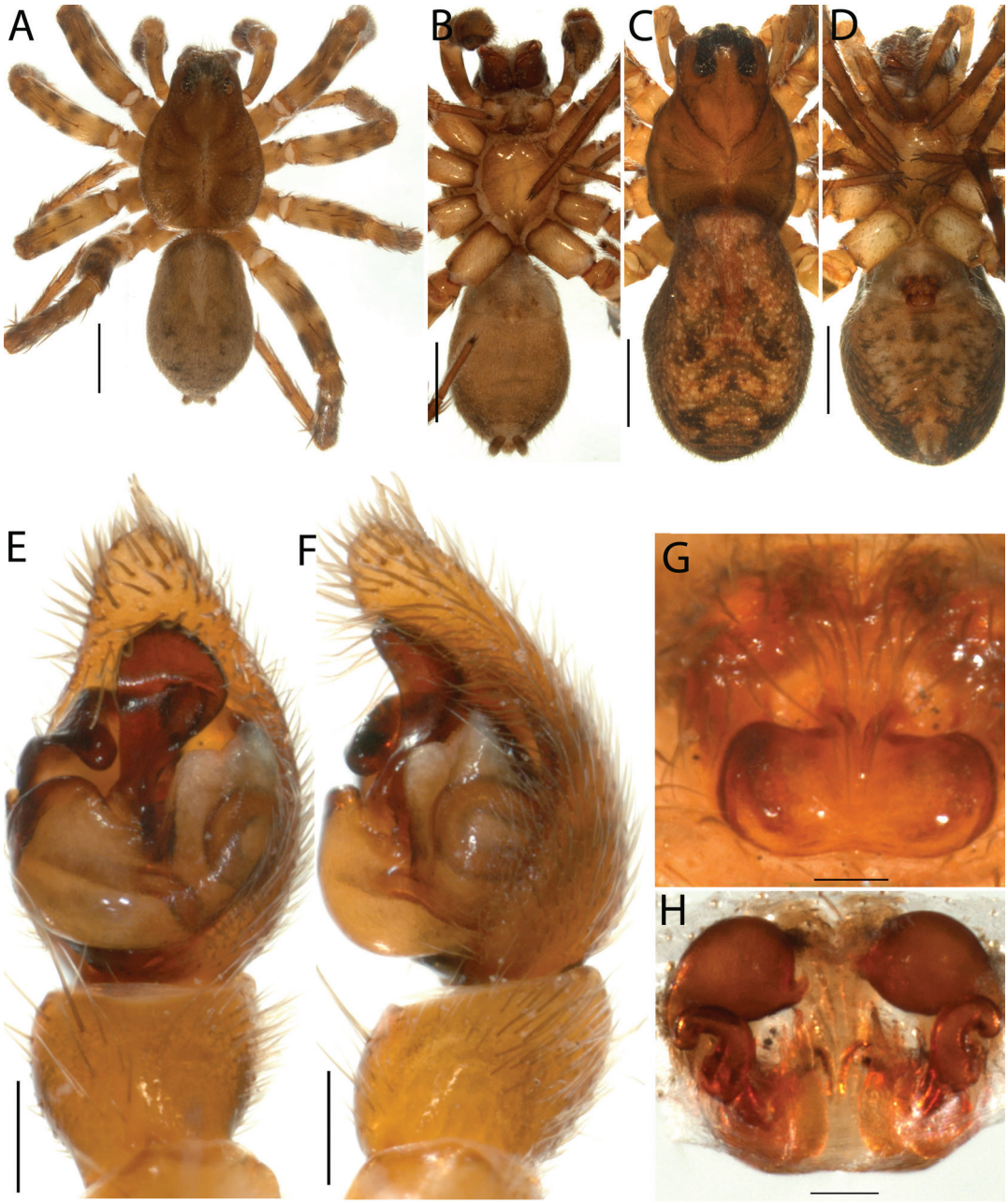

Figure 28. *Artoria lineata* (L. Koch, 1877), male and female (AM KS21673): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

(WAM T56210); 1 female, Warrumbungle National Park, 1.1 km W of White Gum Carpark, 31°17’11”S, 149°02’11”E (AM KS75452); 1 female, Warrumbungle National Park, 1.4 km E of western entrance to park, 31°16’31”S, 148°57’47”E (AM KS75469); 1 male, Watagan State Forest, , approx. 60 m from Watagan Creek Road, 33°02’12”S, 151°18’16”E (AM KS122409); 1 female, Watagan Mountains, Mt Kyall, Bakers Road, 32°52’S, 151°25’E (AM KS23674); 2 females, Widbilliga National Park, Bunberry Creek Fire Trail, 36°15’S, 149°33’E (AM KS64414); 1 male, Wollemi National Park, 250 m from hairpin bend and 1 km S of Glen Davis, 33°07’43”S, 150°16’40”E (AM KS122662); 7 males, 2 juv., Wombayan Caves area, hillside N of camping area, 34°18’S, 149°58’E (AM KS22501); 1 male, Wombayan Caves area, N of camp site, 34°18’S, 149°58’E (AM KS29661); 2 males, Wombeyan Caves area, 34°19’S, 149°59’E (AM KS27997); 4 males, Wombeyan Caves area, hillside north of camping ground, 34°19’S, 149°59’E (AM KS22548); 1 male, Wombeyan Caves Area, N of campground, 34°19’S, 149°59’E (AM KS21687); 5 males, Woodford, Ridge Street, 33°43’50”S, 150°28’40”E (AM KS53953–4).

Diagnosis (after Framenau 2002). *Artoria lineata* forms part of the *lineata*-group, that includes those species in which the male pedipalp has a spoon-shaped

tegular apophysis and the median septum of the female epigyne is often inverted T-shaped. In NSW and the ACT this group also includes *A. quadrata* and *A. ulrichi*. Identification of the species in this group is notoriously difficult and, in males, is best achieved by dissecting the pedipalp for an examination of the palea. Males of both *A. lineata* and *A. ulrichi* have an oval tegular apophysis (Fig. 46A, B), which is more rectangular or apically truncated in *A. quadrata* (Fig. 46C). Males of *A. lineata* and *A. ulrichi* can be distinguished by the position of the embolus and terminal apophysis. The tip of both is visible apically of the tegulum in *A. lineata* but totally concealed by the tegulum in *A. ulrichi*. In the dissected palea, the basal edge of the embolus is straight in *A. lineata* (Fig. 46A), but distinctly curved in both *A. ulrichi* (Fig. 46B) and *A. quadrata* (Fig. 46C).

The female epigyne in both *A. lineata* and *A. ulrichi* has an inverted, T-shaped median septum, however, the posterior border is light or transparent along its whole length in *A. lineata*, whereas the lateral tips of the medium septum are dark all around in *A. ulrichi*.

Description. *Artoria lineata* has been described in detail (Framenau 2002). A diagnosis and diagnostic images (Figs 10A, B, E, F, 28A–H, 46A) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria lineata* is a forest species and has been found in the leaf litter of dry and wet sclerophyll forests and rainforest. Mature males and females can be found all year round with peaks of activity in August and October. Females can also be found in high numbers through summer and into autumn.

Distribution. *Artoria lineata* appears to be widespread in all IBRA regions immediately east and west of the Great Dividing Range (Fig. 27). The species otherwise occurs in Queensland, throughout Victoria, south-eastern South Australia and Tasmania (Framenau 2002; 2005)

Artoria maroota sp. n.

http://zoobank.org/9DFC675D-88A8-4ACC-984E-C0D0E1BB9CFA

Figs 29A–D, 30, 48B

Maroota Forest Runner

Material examined. Holotype male, Maroota State Forest (33°31’S, 150°59’E, New South Wales, AUSTRALIA), 26 October 1979, G.A. Webb, pitfall trap (AM KS128075). Paratypes: 3 males, data as holotype (AM KS73455).

Other material examined. 8 males in 7 records (all NSW). **AUSTRALIA**: **New South Wales:** 1 male, Beecroft Peninsula, northern headland of Jervis Bay, 35°03’03”S, 150°47’21”E (AM KS63443); 1 male, 1 juv., Hazelbrook, Railway Parade, 33°43’55”S, 150°27’00”E (AM KS51828); 6 males, Maroota State Forest, 33°31’S, 150°59’E (AM KS73302, KS73337, KS73352, KS73387, KS84094).

Etymology. The specific name is a noun in apposition referring to the type locality, Maroota State Forest.

Diagnosis. Males of *Artoria maroota* sp. n. are able to be distinguished from all other species of the genus by the black setal brushes on the tibia of leg I and the inverted L-shaped tegular apophysis (Fig. 29C).

Description. Male (based on holotype, AM KS128075).

Total length 2.5.

Prosoma. Length 1.4, width 1.0; carapace shiny, light dark grey with darker radial pattern and black V-shaped pattern between cephalic and thoracic region; indistinct and irregular lighter central and marginal band (Fig. 29A); sternum pale, margin darker (Fig. 29B).

Eye. Diameter of AME: 0.06; ALE: 0.08; PME: 0.17; PLE: 0.14.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Medium brown.

Labium. Dark brown, with lighter anterior rim (Fig. 29B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 29B).

Legs. Distal part of femora and tibiae dark; other legs brown, femora and tibiae with darker annulations; tarsi and metatarsi less annulated (Fig. 29A).

Opisthosoma. Length 1.1, width 0.8; dark grey with pale anterior cardiac mark and pale irregular pattern (Fig. 29A). Venter pale with darker pattern around spinnerets (Fig. 29B); spinnerets pale.

Pedipalps. Tibia as long as broad; cymbium tip with cluster of macrosetae (Fig. 29C, D); dorsal scopula patch present; tegular apophysis inverted L-shaped with distal protuberance, scooped, basally narrowed to 1/3, retrolateral tip pointed and reaching margin of cymbium (Fig. 29C); palea about twice as long as wide; basoembolic apophysis triangular, tip broadly rounded; embolus broad, nearly straight; terminal apophysis broad, tip triangular (Fig. 48B).

Female unknown.

Life history and habitat preferences. No detailed habitat data were available from the locality labels. As the species was mainly collected during a forest survey it appears to be a forest dweller.

Mature males were collected from October to December suggesting it is spring/summer mature.

Distribution. This species was found in the Sydney Basin (SYB) IBRA region in eastern central NSW (Fig. 30).

Artoria mckayi Framenau, 2002

Figs 1A–B, 30, 31A–H, 46G

McKay Creek Runner

Artoria mckayi Framenau, 2002: 220–222, figs A–F, 14.

Material examined. Holotype male, Ovens River near Smoko (36°48’S, 147°02’E, Victoria, AUSRALIA), 16 December 1998, riparian gravel bank at the water’s edge, V.W. Framenau (NMV K7531).

Other material examined. 13 males, 15 females (3 with eggsac) and 2 juveniles in 15 records (14 NSW, 1 ACT).

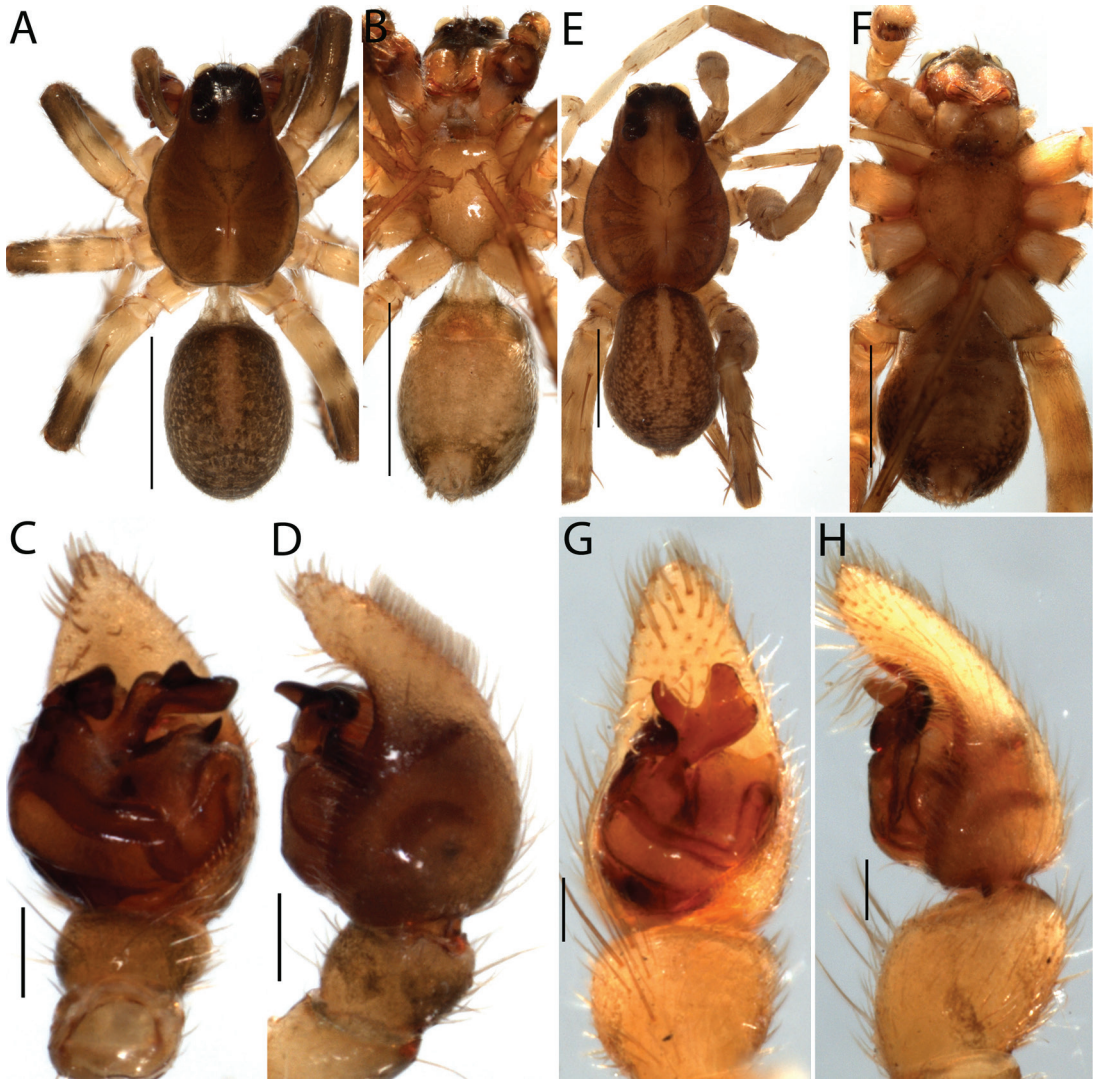

Figure 29. A–D, *Artoria maroota* sp. n.**,** male holotype (AM KS128075), **E–H**, *Artoria myallensis* sp. n. male holotype (AM KS84055): **A**, habitus, dorsal view; **B**, habitus, ventral view; **C**, male pedipalp, ventral view; **D**, male pedipalp, retrolateral view; **E**, habitus, dorsal view; **F**, habitus, ventral view; **G**, male pedipalp, ventral view; **H**, male pedipalp, retrolateral view. Scale bars: habitus 1.0 mm; palp 0.1 mm

AUSTRALIA: Australian Capital Territory: 1 male, Tidbinbilla, 35°26’S, 148°56’E (SAM NN13548). **New South Wales:** 1 female, Brookvale Creek, 33°46’10”S, 151°16’04”E (AM KS125974); 3 males, 2 females, Gloucester River, 31°59’S, 151°58’E (NMV K7564); 1 female, Jamberoo Mountain, 34°40’S, 150°43’E (AM KS54476); 1 female, Limeburners Creek crossing, off Bucketts Way, Karuah River Drainage, 32°37’S, 151°53’E (AM KS43639); 1 female, Mooney Mooney Rainforest, S of Road Bridge, 33°31’S, 151°12’E (AM KS1523); 4 males, 2 females, 2 juv., Mt Rose Station, 33°49’S, 150°04’E (AM KS10022); 1 male, 1 female, Mt Warning, Murwillumbah, 28°24’S, 153°16’E (SAM NN13549–50); 1 male, Nadgee Nature Reserve, 37°22’S, 149°55’E (AM KS32175); 1 female, New England National Park, Nulla Nulla Creek Campground, 30°30’S, 152°29’E (AM KS71562); 1 female, Oxley Wild Rivers National Park, 30°48’26”S, 152°07’02”E (AM KS124378); 3 females, St Marys, 33°46’S, 150°46’E (AM KS8135); 1 male, Upper Hunter River, Jerrys Plains, 32°31’05”S, 150°56’04”E (AM KS100870); 2 males, Wilson River Flora Reserve, 31°13’S, 152°26’E (AM KS9713).

Diagnosis. *Artoria mckayi* is most similar to *A. albopedipalpis* Framenau, 2002, a species which has only been recorded from Victoria (Framenau, 2002). The ventrally-pointing tegular apophysis of the male pedipalp (Fig. 31E) is somewhat similar to that of *A. berenice* (Fig. 11E) but is much slimmer. The female epigyne (Fig. 31G) may resembles that of *A. berenice* (Fig. 11G) but is overall much rounder and less constricted posteriorly.

Description. *Artoria mckayi* has been described in detail (Framenau 2002). A diagnosis and life and diagnostic images (Figs 1A–B, 31A–H, 46G) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria mckayi* is a riparian habitat specialist and can mainly be found along the

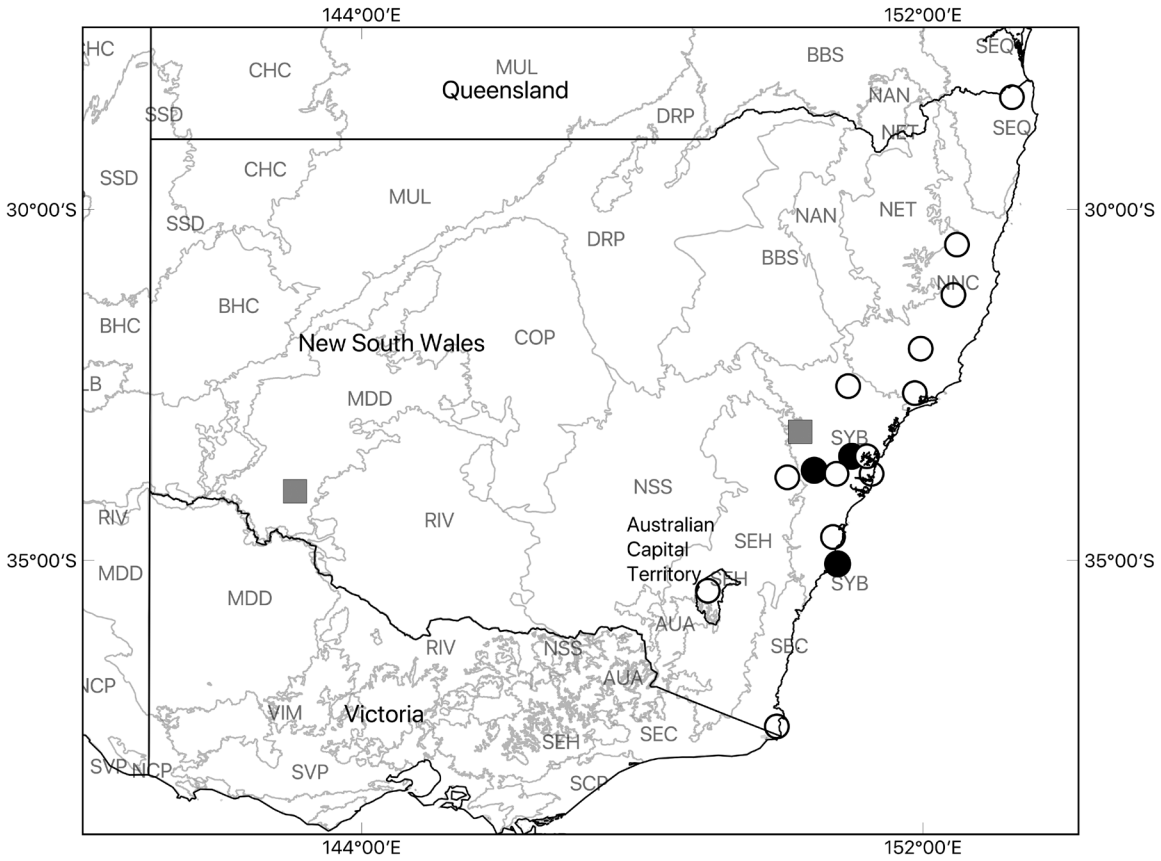

Figure 30. Distribution records of *Artoria maroota* sp. n. (full circles), *A. mckayi* Framenau, 2002 (open circles) and *A. mungo* sp. n. (grey squares) in NSW and ACT. IBRA bioregions with spider records: MDD – Murray Darling Depression; NNC – NSW North Coast; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

edges of rivers and creeks on both muddy and rocky banks. In NSW and the ACT mature spiders have been found between October and May. In Victoria, the adult spiders (species 'A' in Framenau et al. 2002) can be found throughout the year with lower numbers mainly in spring (March).

Distribution. *Artoria mckayi* occurs at rivers and creeks of the Great Dividing Range (Fig. 30). The species otherwise occurs in Queensland, Victoria, south-eastern South Australia and Tasmania (Framenau 2002; 2005).

Artoria mungo sp. n.

http://zoobank.org/652F7484-9AB2-49F8-916F-AF41FABB80A6

Figs 30, 32A–H, 48C

Mungo Forest Runner

Material examined. Holotype male, Lake Mungo National Park (33°41'S, 143°03'E, New South Wales, AUSTRALIA), 26 August–1 September 2017, B.C. Baehr, pitfall trap, chenopod scrub, 66 m alt. (AM KS127733). Paratype: 1 female, Lake Mungo National Park (33°41'S, 143°03'E, New South Wales, AUSTRALIA), 26 August–1 September 2017, B.C. Baehr, pitfall trap, mallee scrub, 80 m alt. (AM KS127697).

Other material examined. 3 males in 3 records (all NSW). AUSTRALIA: New South Wales: 3 males, Newnes Plateau, 31°10'S, 150°15'E (AM KS16958–9, KS16961).

Etymology. The specific name is a noun in apposition referring to the type locality.

Diagnosis. Based on the shape of the tegular apophysis, males of *A. mungo* sp. n. are most similar to *A. helensmithae* sp. n. and *A. beaury* sp. n. *Artoria beaury* sp. n. differs distinctly in the shape of the basoembolic apophysis which is much broader than that of *A. mungo* sp. n. In *A. helensmithae* sp. n. the apical edge of the tegular apophysis is much more indented than in *A. mungo* sp. n. Female *A. mungo* sp. n. are most similar to *A. wilkiei* sp. n. based on the shape of the epigyne in ventral view, but the spermathecal heads of the latter are much larger and touching medially.

Description. Male (based on holotype, AM KS127733).

Total length 3.6.

Prosoma. Length 2.0, width 1.4; carapace greyish with dark radial pattern; indistinct lighter narrow marginal band and v-shaped central band constricted between PME (Fig. 32A); sternum light brown, dusted dark grey (Fig. 32B).

Eyes. Diameter of AME: 0.08; ALE: 0.09; PME: 0.25; PLE: 0.16.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Medium brown.

Figure 31. *Artoria mckayi* Framenau, 2002, male (AM KS45830), female (AM KS54476): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Labium. Dark brown, with lighter anterior rim (Fig. 32B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 32B).

Legs. Yellow-brown, with darker annulations; tibiae, metatarsi and tarsi I darker, less annulated, lighter (Fig. 32A).

Opisthosoma. Length 1.6, width 1.2; cinnamon-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 32A). Venter light brown with darker pattern (Fig. 32B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with few smaller distoventral macrosetae (Fig. 32E, F); dorsal scopula patch present; tegular apophysis distally widely scooped, basally narrowed to 1/3, retrolateral tip pointed and reaching margin of cymbium (Fig. 32E); palea about 1 1/2 long as wide, basoembolic apophysis triangular; embolus broad, widely semicircular; terminal apophysis broad, with rounded tip (Fig.48C).

Female (based on AM KS127697).

Total length 3.5.

Prosoma. Length 1.4, width 1.1; carapace and sternum colouration as male (Fig. 32C, D).

Eyes. Diameter of AME 0.08, ALE 0.07, PME 0.19, PLE 0.13.

Anterior eye row. Slightly procurved, evenly spaced.

Opisthosoma. Length 2.1, width 1.7; otherwise as male, but legs less annulated and opisthosoma pattern more obscure (Fig. 32C, D).

Epigyne. About 1 ½ times longer than wide, strongly sclerotised at posterior tips, atrium semicircular (Fig. 32G); spermathecal heads globular, less than 1/5 of diameter apart, spermathecal stalks attached laterally and basally bent (Fig. 32H).

Life history and habitat preferences. It appears that this species has affinities to at least intermittently flooded areas, as it has been found near swamps and creeks in dry sclerophyll bushland and scrubland. Mature spiders have

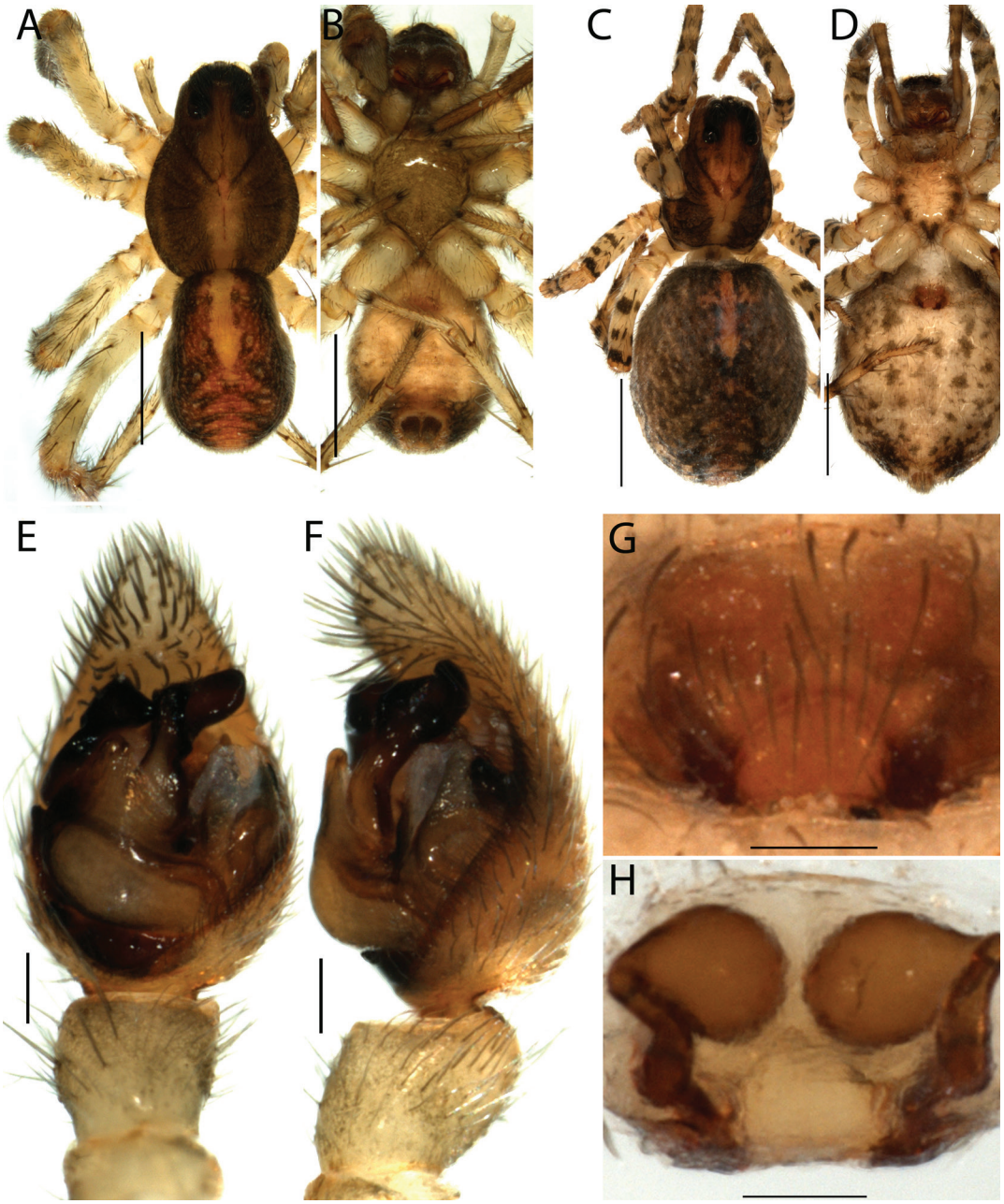

Figure 32. *Artoria mungo* sp. n., male holotype (AM KS12773), female paratype (AM KS127697): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

been found in August, September and January suggesting it is spring- to summer-mature.

Distribution. *Artoria mungo* sp. n. is currently known from two widely separate locations in the Murray Darling Depression (MDD) and Sydney Basin (SYD) IBRA regions (Fig. 30).

Artoria munmorah sp. n.

http://zoobank.org/7CC1F17A-73BA-4009-8806-DF9130D08703

Figs 33A–H, 34, 48D

Munmorah Forest Runner

Material examined. Holotype male, Munmorah State Recreation Reserve (33°12’26”S, 151°34’37”E, New South Wales, AUSTRALIA), 11 October 1997, L. Wilkie, pitfall trap, MUNC01/06 (AM KS128070). Paratypes: 14 males, same data as holotype (AM KS61961); 1 male, same data as holotype (ZMH A0002170); 1 female, Munmorah State Recreation Reserve [33°12’S, 151°34’E, New South Wales, AUSTRALIA] 11 Oct 1997, L. Wilkie, pitfall trap, MUNC01/08 (AM KS61980); 2 females, Koorawatha Nature Reserve (34°02’31”S, 148°34’35”E, New South Wales, AUSTRALIA), 11–17 November 2010, B.C. Baehr, pitfall trap (AM KS117670); 1 female, same data (ZMH A0002171).

Other material examined. 19 males and 32 females in 35 records. **AUSTRALIA: New South Wales:** 1 male, Bungonia Caves area near Information Centre,

34°48’02”S, 150°00’57”E (AM KS86424); 1 female, 80 m from Cassilis Road and 20 km NW of Cassilis, private land, 31°54’01”S, 149°48’21”E (AM KS128877); 1 female, Maroota State Forest, 33°31’S, 150°59’E (AM KS73332); 1 male, Munmorah State Recreation Area, 33°12’24”S, 151°34’59”E (AM KS61969); 3 males, 13 females, Munmorah State Recreation Area, 33°12’26”S, 151°34’37”E (AM KS61962, KS61971, KS61977, KS61975, KS61979, KS61983, KS61987–9, KS61991); 2 males, 1 female, Munmorah State Recreation Area, 33°12’34”S, 151°34’59”E (AM KS61966, KS61976); 7 males, 1 female, Munmorah State Recreation Area, 33°13’09”S, 151°34’15”E (AM KS61963–4, KS61967–8, KS61974); 1 male, Munmorah State Recreation Area, 33°13’20”S, 151°34’01”E (AM KS61990); 2 females, Myall Lakes National Park, 32°29’22”S, 152°23’53”E (AM KS61985, KS84057); 1 male, Myall Lakes National Park, 32°30’26”S, 152°21’55”E (AM KS61965); 1 female, 60 m from Tonbong Road and 7 km NW of Rylstone, private land, 32°44’25”S, 149°55’43”E (AM KS122752); 3 females, Wyrrabalong National Park, 33°16’44”S, 151°32’51”E (AM KS61981); 1 male, 1 female, Wyrrabalong National Park, 33°16’47”S, 151°32’40”E (AM KS61984, KS61992); 1 female, Wyrrabalong National Park, 33°16’48”S, 151°32’45”E (AM KS61972); 2 males, 4 females, Wyrrabalong National Park, 33°16’51”S, 151°32’37”E (AM KS61982, KS61986, KS61994, KS62065).

Etymology. The specific name is a noun in apposition referring to the type locality, Munmorah State Recreation Reserve.

Diagnosis. Males of *A. munmorah* sp. n. share with *A. booderee* sp. n., *A. corowa* sp. n. and *A. equipalus* sp. n. a distinctly bi-lobed tegular apophysis (see also diagnosis for these species). They differ from *A. booderee* sp. n. by the less elongate cymbium, from *A. corowa* sp. n. by the tegular apophysis reaching past the cymbium edge in ventral view and from *A. equipalus* sp. n. by the basal lobe of the tegular apophysis being less sclerotised. Females of *A. munmorah* sp. n. have a poorly sclerotised epigyne most similar to that of *A. equipalus* sp. n. and *A. mungo* sp. n., but differ distinctly in the shape of the spermathecal heads, specifically in the postero-lateral attachment of the spermathecal ducts (lateral in *A. mungo* sp. n. and postero-medial in *A. equipalus* sp. n.).

Description. Male (based on holotype KS128070).

Total length 2.9.

Prosoma. Length 1.7, width 1.2; carapace yellow-brown dusted with grey and indistinct dark radial pattern; lateral margin and central band pale yellow, broader in cephalic area, constricted halfway between cephalic area and fovea (Fig. 33A); sternum yellow-brown, dusted dark grey (Fig. 33B).

Eyes. Diameter of AME: 0.06; ALE: 0.05; PME: 0.19; PLE: 0.15.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 33B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 33B).

Legs. Femora and tibiae of leg I, II dark; other legs yellow-brown, with slightly darker annulations (Fig. 33A).

Opisthosoma. Length 1.2, width 0.9; yellow-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 33A). Venter pale with darker pattern (Fig. 33B); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; dorsal scopula patch absent; tegular apophysis distally scooped, deeply indented, basally narrowed to 1/2, retrolateral tip rounded reaching margin of cymbium (Fig. 33E); palea about as long as wide; basoembolic apophysis triangular, tip rounded; embolus broad, nearly straight with blunt tip; terminal apophysis indistinct (Fig. 48D).

Female (based on AM KS61980).

Total length 3.4.

Prosoma. Length 1.7, width 1.2; carapace and sternum colouration as male (Fig. 33C, D).

Eyes. Diameter of AME 0.08, ALE 0.05, PME 0.23, PLE 0.17.

Anterior eye row. Slightly procurved, evenly spaced.

Opisthosoma. Opisthosoma length 1.7, width 2.1; otherwise as male, but opisthosoma pattern more obscure (Fig. 33C, D).

Epigyne about as long as wide, poorly sclerotised at posterior tips, atrium lighter, bell-shaped (Fig. 33G); spermathecal heads globular about 1/3 diameter apart, spermathecal stalks attached laterally slightly s-shaped (Fig. 33H).

Life history and habitat preferences. There is only a single record with habitat information, ‘canopy of trees with grass under’; therefore, habitat preferences of *A. munmorah* sp. n. remain unclear.

Mature spiders have been found between October and January, therefore this species appears to be spring- to summer-mature.

Distribution. *Artoria munmorah* sp. n. is currently known from eastern central NSW along both sides of the Great Dividing Range and occurs in the NSW North Coast (NNC), Sydney Basin (SYB), South Eastern Highlands (SHE), NSW South Western Slope (NSS) and Brigalow Belt South (BBS) IBRA regions (Fig. 34).

Artoria myallensis sp. n.

http://zoobank.org/F9E459B5-6861-4F35-9583-567DCB5D165B

Figs 29E–H, 34

Myall Lakes Runner

Material examined. Holotype male, Myall Lakes (32°26’S, 152°24’E, New South Wales, AUSTRALIA), September 1922, A. Musgrave (AM KS84055).

Other material examined. Known only from holotype.

Etymology. The specific name is an adjective in apposition derived from the type locality, Myall Lakes.

Diagnosis. Males of *A. myallensis* sp. n. differ from all other *Artoria* by the deeply indented, three-lobed tegular

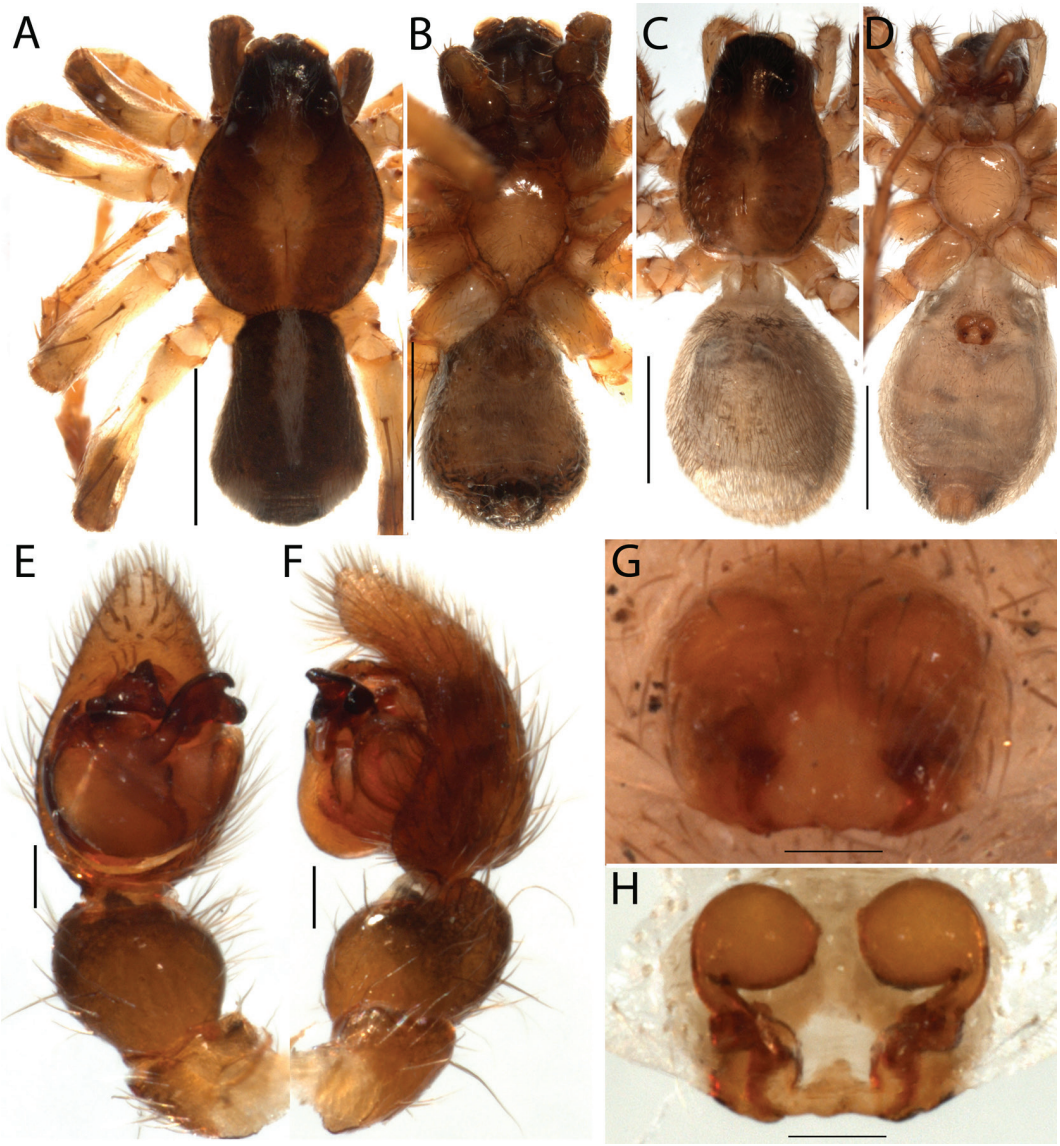

Figure 33. *Artoria munmorah* sp. n., male (AM KS128070), female (AM KS61980): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

apophysis (Fig. 29G). It appears most similar to *A. belfordensis* sp. n. (Fig. 9E), but it does not have the drawn out and pointed bases of the basoembolic apophysis of that species.

Description.

Male (based on holotype, AM KS84055).

Total length 3.9.

Prosoma. Length 2.2, width 1.5; carapace greyish with slightly dark radial pattern; indistinct lighter marginal band and v-shaped central band constricted between PME (Fig. 29E); sternum light brown, dusted dark grey (Fig. 29F).

Eyes. Diameter of AME: 0.10; ALE: 0.09; PME: 0.28; PLE: 0.21.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Light brown.

Labium. Medium brown, with lighter anterior rim (Fig. 29F).

Pedipalp coxae. Medium brown, with lighter anterior rim (Fig. 29F).

Legs. Yellow-brown, with darker annulations; metatarsi and tarsi less annulated, lighter (Fig. 29E).

Opisthosoma. Length 1.7, width 1.2 dark grey with light yellow-brown anterior cardiac mark and light irregular pattern (Fig. 29E). Venter light brown with sparse darker pattern (Fig. 29F); spinnerets pale.

Pedipalps. Pedipalp globular, tibia as long as broad; cymbium tip with cluster of disto-ventral macrosetae (Fig. 29G, H); dorsal scopula patch sparsely present, short; tegular apophysis distally wide, deeply indented, basally narrowed to 1/3, retrolateral part widely scooped with two tips not reaching margin of cymbium (Fig. 29G); basoembolic apophysis about as long as broad, broadly rounded; not visible and not dissected as the holotype has only one pedipalp (Fig. 29G).

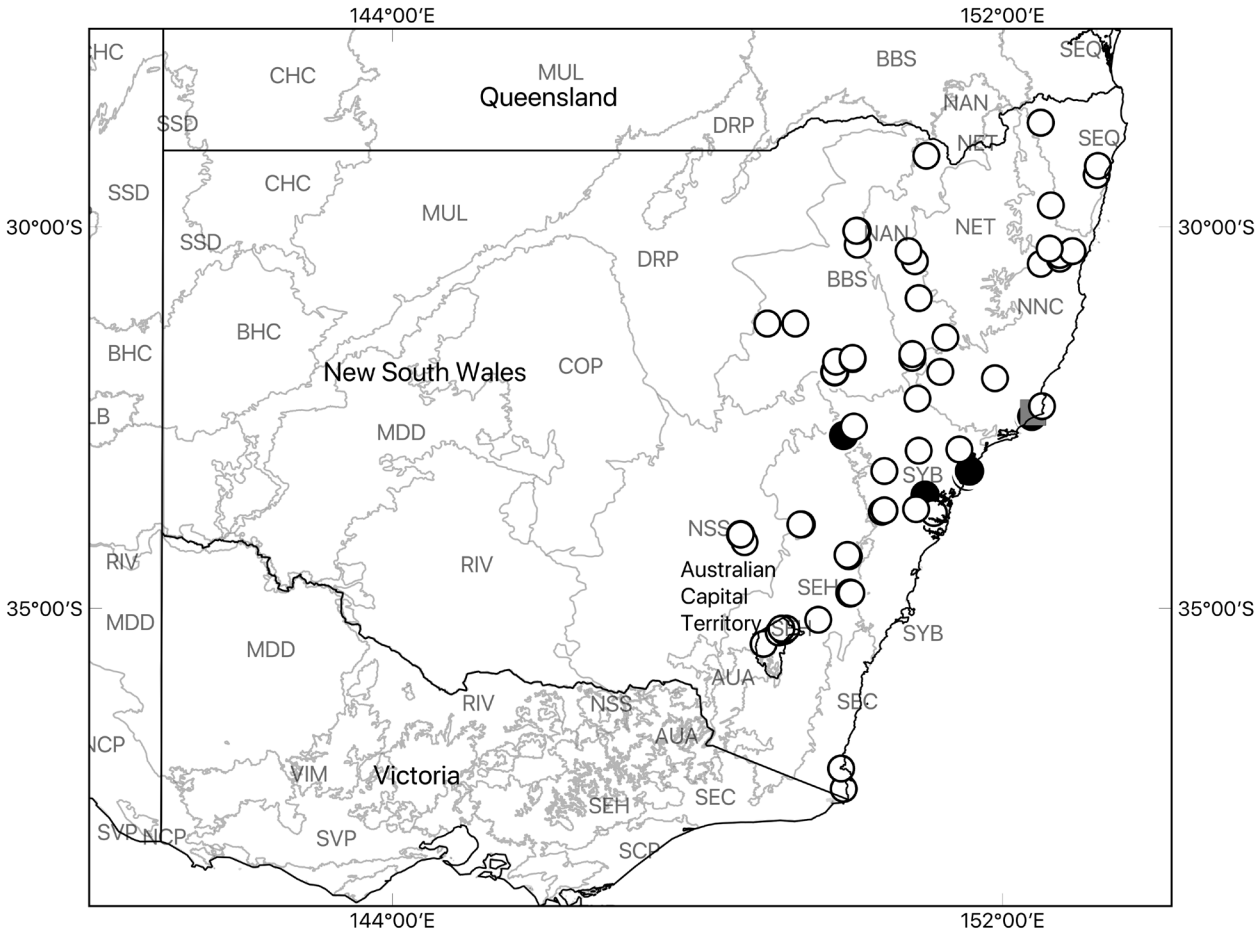

Figure 34. Distribution records of *Artoria munmorah* sp. n. (full circles), *A. myallensis* sp. n. (grey square) and *A. quadrata* Framenau, 2002 (open circles) in NSW and ACT. IBRA bioregions with spider records: AUA – Australian Alps; BBS – Brigalow Belt South; NAN – Nandewar; NET – New England Tablelands; NNC – NSW North Coast; NSS – NSW South Western Slopes; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Female unknown.

Life history and habitat preferences. Habitat preferences of *A. myallensis* sp. n. are not known. The holotype was found at the beginning of spring (September).

Distribution. *Artoria myallensis* sp. n. is known only from the type locality, the coastal Myall Lakes in the southern NSW North Coast (NNC) IBRA region (Fig. 34).

Artoria pruinosa (L. Koch, 1877)

Lycosa pruinosa L. Koch, 1877: 925–927, pl. 80, figs 2, 2a;
Rainbow 1911: 271; McKay 1973: 379; McKay 1985: 82.
Dingosa pruinosa (L. Koch).- Roewer 1955: 240.
Artoria pruinosa (L. Koch).- Framenau 2005: 288.

Material examined. Holotype male, Sydney (33°45’S, 151°06’E, New South Wales, AUSTRALIA), Bradley Collection (considered lost (Framenau 2005)). Not examined.

Remarks. The transfer of *Lycosa pruinosa* to *Artoria* was based on the morphology of the male pedipalp as illustrated in the original description (L. Koch 1877; fig. 2a), which displays a clear artoriine structure (Framenau 2005). However, the body colouration of the holotype illustrated (L. Koch 1877; fig. 2) with a light median band on a uniformly black abdomen does not match the genus description. As part of our comprehensive revision of NSW *Artoria* we could not identify this species, originally described from Sydney. The most similar species is *Artoriopsis whitehouseae* Framenau, 2007; however, the type locality, Sydney, for *A. pruinosa* falls far outside the range of that species, which so far has only been found west of the Great Dividing Range (Framenau, 2007; unpublished data). Considering the uncertainty identifying *A. pruinosa* due to the lack of the type specimen, we here consider the species-group name *Lycosa pruinosa* L. Koch, 1877 a *nomen dubium*.

Artoria quadrata Framenau, 2002

Figs 34, 35A–H, 46C
Square Forest Runner

Artoria quadrata Framenau, 2002: 224–226, figs 19A–F, 20.

Material examined. Holotype male, Avon River near Valencia Creek (37°48’S 146°27’E, Victoria, AUSTRA-

LIA], 18 December 1996, riparian gravel bank, V.W. Framenau (NMV K7678). Paratypes: 3 females, same data as holotype, except 18 December 1996–1 January 1997, pitfall trap (MV K7679–80).

Other material examined. 152 males, 88 females (3 with eggsac) and 30 juveniles in 91 records (85 NSW, 6 ACT). **AUSTRALIA**: **Australian Capital Territory:** 1 male, Black Mountain, 35°16'S, 149°06'E (QM S64055); 1 male, Black Mountain, W slope (Caswell Drive), 35°16'S, 149°06'E (ANIC); 1 male, 1 female, Canberra, 35°18'S, 149°08'E (NMV K7758); 1 female, Mt Ainslie, NW face, 35°16'S, 149°10'E (ANIC); 3 females, 1 juv., Tidbinbilla Nature Reserve, 35°28'S, 148°52'E (AM KS13964); 1 male, Yarralumla, 35°19'S, 149°04'E (ANIC). **New South Wales:** 1 male, `Temi` (N of Murrurundi), Chilcotts Creek Road, 31°40'48"S, 150°49'00"E (AM KS82850); 1 female, `Temi`, off Chilcott's Creek Road, near gate, off New England Highway, approx. 7 km S of Willow Tree, 31°40'48"S, 150°49'01"E (AM KS75586); 1 female, 3 km east of New England Highway and 3 km east of Ardglen, 31°43'44"S, 150°49'10"E (AM KS123042); 1 female, 400 m from Moss Vale Road and 5 km NW of Moonan Flat, private land, 31°54'13"S, 151°11'54"E (AM KS123083); 1 female, 500 m off Barrington West Road and 3 km S of Barrington, private land, 31°59'42"S, 151°54'08"E (AM KS122814); 4 females, 70 m from Coolah Creek Road and 11 km northeast of Coolah, private land 'Mt Mill', 31°46'20"S, 149°49'02"E (AM KS123019); 2 males, 4 females, 80 m from Cassilis Road and 20 km NW of Cassilis, private land, 31°54'01"S, 149°48'21"E (AM KS122586, KS123016); 5 males, 4 females, 9 juv., Abercrombie Caves area, near Bushrangers Cave, 33°54'45"S, 149°21'28"E (AM KS22494); 1 male, 5 juv., Abercrombie Caves area, through arch near Bushrangers Cave, 33°54'S, 149°22'E (AM KS21686); 1 female, Abercrombie Caves, entrance arch, 33°54'45"S, 149°21'28"E (AM KS5523); 33 males, 9 females, 12 juv., Abercrombie Caves, near Bushrangers Cave, 33°54'S, 149°22'E (AM KS22469, KS22486); 3 females, approx. 10 m from Creek, 4 km SW of Mt Vincent, private land, 32°55'41"S, 151°26'30"E (AM KS122336); 4 females, Attunga State Forest, S of Ardey Range, W edge of SF, opposite `Tralee`, 30°56'00"S, 150°54'19"E (AM KS82848, KS82861); 1 female, Bellinger River Station, about 600 m down small track off Dorrigo-Bellingen Highway 1 km W of Summervilles Road, 30°25'03"S, 152°45'30"E (AM KS85360); 2 males, Bullaburra Red Gum Park, 33°44'S, 150°25'E (AM KS51841); 1 male, Bungendore NW, Mt Fairy, 35°9'S, 149°35'E (QM S21907); 2 males, Bungonia, 34°48'S, 150°01'E (WAM T55468); 1 male, Bungonia Caves Area, near Information Centre, 34°48'S, 150°01'E (AM KS71666); 1 male, 1 female, Christophersons Mountain, 2 km SSW of Bostobrick, 30°17'45"S, 152°37'04"E (AM KS61739); 1 female, Coolah Tops National Park, 200 m from Warung State Forest Road, 31°44'01"S, 150°02'17"E (AM KS123028); 16 males, 3 females, Coolah Tops National Park, The Forest Road, 0.3 km E of Hildergard Road, 31°43'59"S, 150°02'04"E (AM KS75425); 2 females, Coonabarabran, `Smoky Hollow`, 31°16'S, 149°17'E (AM KS7555, KS7558); 2 males, 3 females, Crown Reserve, Barraba-Bundarra Road, N of `Ironbark`, 30°19'46"S, 150°46'34"E (AM KS82847); 1 female, Dorrigo National Park, 30°22'S, 152°45'E (ANIC); 1 female, Dorrigo National Park, Wonga Walk, 30°22'S, 152°45'E (ANIC); 5 females, 3 juv., Dorrigo National Park, Wonga Walk, 200 m SW of Hardwood Lookout, 30°22'53"S, 152°44'00"E (AM KS35660); 3 females, Doubleduke State Forest, 1 km SW of junction of Pacific Highway and Glencoe Road, 29°12'46"S, 153°15'29"E (AM KS39701); 1 male, Ferntree Gully Reserve, approx. 170 m from Bylong Valley Way and 4 km SW of Ginghi, 32°37'20"S, 150°03'37"E (AM KS128880); 21 male, 1 femal, Hazelbrook, Winbourne Road, 33°43'20"S, 150°27'25"E (AM KS52081, KS52085–6, KS52088, KS53941, KS53942–3, KS53946–7, KS53948, KS53950–2); 1 female, Illunie Nature Reserve, 34°08'33"S, 148°37'37"E (AM KS117678); 1 female, Koorawatha Nature Reserve, 34°02'31"S, 148°34'35"E (AM KS128878); 1 male, Linton Nature Reserve, SW corner of Reserve, 60 m E of road, 30°27'45"S, 150°51'46"E (AM KS82859); 1 male, Marsfield, Sydney, 33°45'S, 151°06'E (WAM T42123); 1 female, Mororo State Forest, 29°19'06"S, 153°14'28"E (AM KS88496); 1 male, 1 female, Mt Kaputar National Park, 250 m S of track to car park at Waa Gorge, 30°03'59"S, 150°05'29"E (AM KS82851KS82856); 1 female, Mt Kaputar National Park, base of W face of Mt Waa, 30°03'59"S, 150°06'05"E (AM KS82855); 2 males, Mt Kaputar National Park, end of Bullawa Creek Road, 50 m NE of picnic area, 30°14'04"S, 150°06'39"E (AM KS82857); 1 female, Nadgee Nature Reserve, 37°22'S, 149°55'E (AM KS86431); 1 female, New England National Park, 30°29'S, 152°30'E (QM S64062); 2 females, Nullica Beach, 37°06'S, 149°53'E (AM KS83719); 1 female, Orara State Forest, junction of Urumbilum Creek Road and Loudens Road, 30°19'35"S, 152°55'00"E (AM KS61026); 8 males, Oxley Wild River National Park, East Kunderang Road, 30°49'S, 152°07'E (AM KS124710KS124746); 18 males, Oxley Wild Rivers National Park, East Kunderang Track, 30°49'S, 152°07'E (AM KS124222); 2 females, Oxley Wild Rivers National Park, Yarrowitch River, 31°04'33"S, 152°03'23"E (AM KS 124544, KS125238); 1 male, Pacific Palms, 32°21'S, 152°31'E (AM KS85363); 1 female, Ponderosa Forest Park, Nundle State Forest, 31°27'30"S, 151°15'00"E (QM S64064); 1 female, Ramornie State Forest, Main Creek, track off Mt Tindal Road, 29°43'01"S, 152°38'24"E (AM KS39706); 1 female, Schofields, 33°42'S, 150°52'E (AM KS85365); 1 female, Severn State Forest, Atholwood Loop Road, 29°04'28"S, 151°00'53"E (AM KS82849); 1 female, The Battery Picnic Area, SE of Merriwa, 33°12'46"S, 150°27'31"E (AM KS75037); 2 males, 3 females, Upper Hunter River, Kayuga Bridge at Muswellbrook., 32°15'12"S, 150°53'16"E (AM KS91854); 1 male, 2 females. Warrumbungle National Park, Camp Pincham Carpark, 31°16'S, 148°55'E (AM KS75177, KS75188, KS75190); 1 female, Wombayan Caves area, 34°19'S, 149°59'E (AM KS85364); 7 males, Wombayan

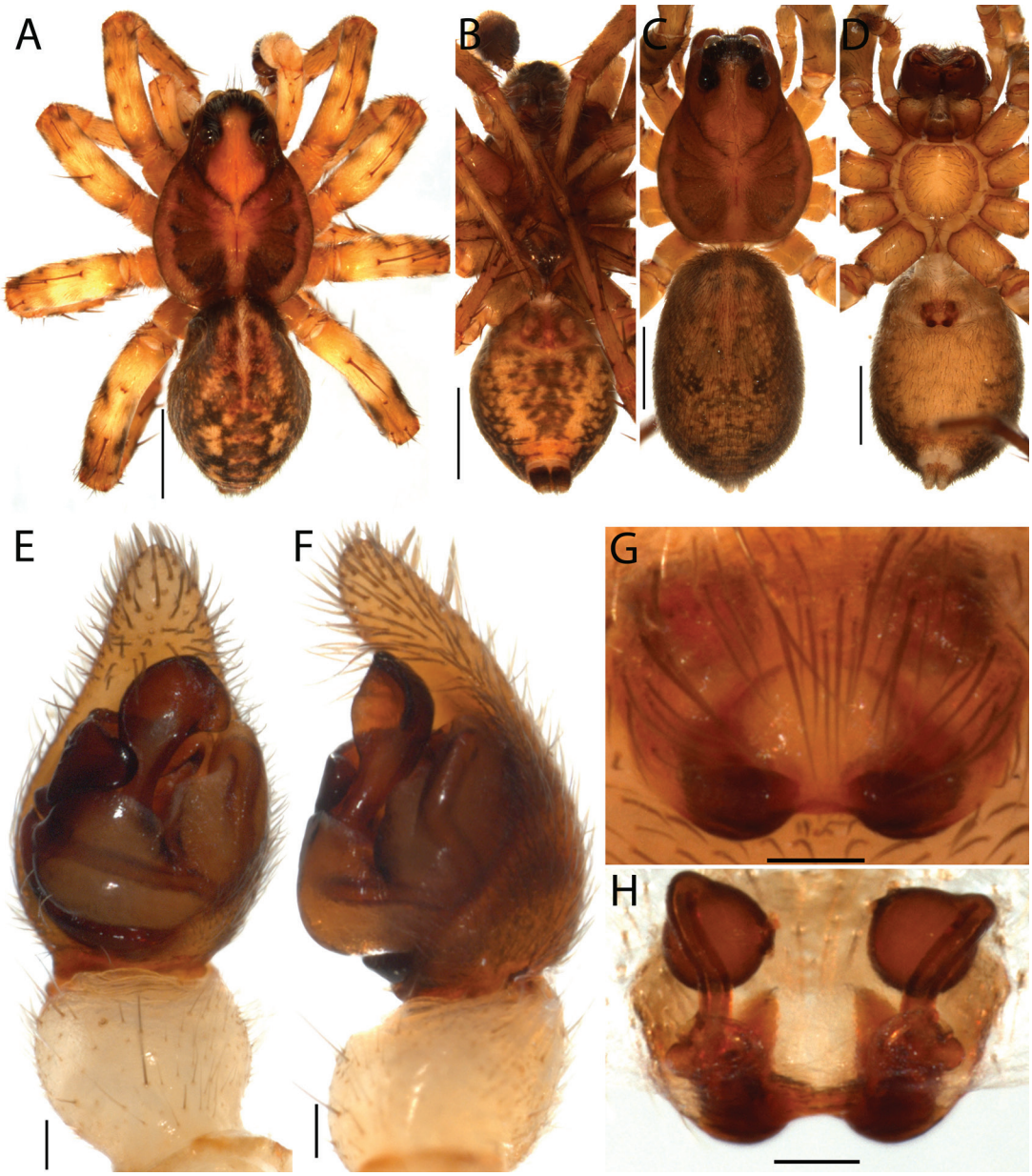

Figure 35. *Artoria quadrata* Framenau,2002, male (AM KS61739), female (AM KS75188): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Caves area, hillside north of camping ground, 34°18'S, 149°58'E (AM KS71665, KS85362); 1 male, Wombeyan Caves area, N of campground, 34°19'S, 149°59'E (AM KS85361); 16 males, 1 female, Yabbra Scrub, Yabbra State Forest, 28°38'S, 152°30'E (AM KS51287, KS57769, KS53795, KS63741, KS63745); 1 female, Yengo National Park, approx 40m from track, 32°56'46"S, 150°54'33"E (AM KS128879).

Diagnosis. *Artoria quadrata* is part of the *lineata*-group, to which also *A. lineata* and *A. ulrichi* belong. A detailed diagnosis for these three species can be found above under the treatment of *A. lineata*.

Description. *Artoria quadrata* has been described in detail (Framenau 2002). A diagnosis and diagnostic images (Figs 35A–H, 46C) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria quadrata* appears to be versatile with respect to its habitat preferences, reported from a variety of environments including woodland and forest habitats (e.g. 'undisturbed forest', 'scattered trees', 'semi-cleared woodland adjacent to pine plantations', 'temperate rainforest' '*Nothofagus* rainforest', 'dry subtropical rainforest'), and also open habitats – some near water – ('open grassy field, swampy', 'open grassy field, edge of river', 'in grass', 'garden', 'bare limestone outcrop'). In NSW and the ACT mature spiders have been found all year round, with a peak from October to January. Three females with eggsacs were found in November.

Distribution. *Artoria quadrata* is common east and west of the Great Dividing Range, from coastal areas into the Brigalow Belt South (BBS) and NSW South Western Slopes (NSS) IBRA regions (Fig. 34). The species otherwise occurs in Queensland and Victoria (Framenau 2002; 2005).

Artoria slatyeri sp. n.

http://zoobank.org/9EE8F46E-EB4E-4F70-A4EC-8D9A7E64DAB7
Figs 36A-D, 37, 48E
Slatyer's Forest Runner

Material examined. Holotype male, Bondi State Forest, woodlot 2 (37°07'S, 149°08'E, New South Wales, AUSTRALIA), 3 February 1980, G. Gowing et al., pitfall trap (AM KS127752). Paratypes: 1 male, same data as holotype (AM KS71596); 2 males, Bondi State Forest, woodlot 3 (37°08'S, 149°09'E, New South Wales, AUSTRALIA), 29 December 1980, G. Gowing et al., pitfall trap (AM KS116619);

Other material examined. AUSTRALIA: New South Wales: 1 male, Wadbilliga National Park, 9.6 km N on Bumberry Creek Fire Trail, 36°14'20"S, 149°34'00"E (AM KS64400).

Etymology. Species name is a patronym in honour of Dr Cameron Slatyer, Head of Natural Science Collections and Branch Manager of Life Sciences at the Australian Museum, who contributed significantly to Australian biodiversity knowledge of conservation reserves through the foundation of Bush Blitz.

Diagnosis. The shape of the tegular apophysis in males of *A. slatyeri* sp. n. is distinctive within *Artoria* (Fig. 36C), most closely resembling that of *A. grahammilledgei* sp. n. (Fig. 22E); however, it is much more elongated than the tegular apophysis of that species. The basoembolic apophysis is much narrower and longer in *A. slatyeri* sp. n. than in *A. grahammilledgei* sp. n.

Description. Male (based on holotype AM KS127752, palea AM KS116619.

Total length 5.1.

Prosoma. Length 2.7, width 2.0; carapace yellow-brown dusted with grey and indistinct dark radial pattern; with pale yellow lateral broad margin and central band, broader in cephalic area constricted just behind PLE (Fig. 36A); sternum dark brown, dusted dark grey (Fig. 36B).

Eyes. Diameter of AME: 0.10; ALE: 0.11; PME: 0.28; PLE: 0.21.

Anterior eye row. Straight, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 36B).

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 36B).

Legs. Yellow brown with darker annulations; tibiae, metatarsi and tarsi darker, less annulated (Fig. 36A).

Opisthosoma. Length 2.4, width 1.6; yellow-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 36A). Venter yellow-brown with darker pattern (Fig. 36B); spinnerets dark grey.

Pedipalps. Tibia globular, as long as broad; cymbium tip with 4–5 short macrosetae (Fig. 36C, D); dorsal scopula patch present; tegular apophysis distally widely scooped, rectangular, basally narrowed to 1/4, retrolateral tip short rounded, reaching margin of cymbium (Fig. 36D); palea about twice as long as wide; basoembolic apophysis short, rounded; embolus elongated, nearly rectangular, reaching beyond terminal apophysis; terminal apophysis short, tip triangular (Fig. 48E).

Female unknown.

Life history and habitat preferences. *Artoria slatyeri* sp. n. is apparently a forest species, the type material being found in a forest reserve. Mature males were found in pitfall traps in December and February suggesting the species is summer-mature.

Distribution. *Artoria slatyeri* sp. n. is currently known only from the Bondi State Forest and Wadbilliga National Park in southern NSW in the South Eastern Highlands (SEH) IBRA region (Fig. 37).

Artoria strepera sp. n.

http://zoobank.org/048435E7-66BC-40E8-B269-745C6B94C022
Figs 2A, 36E–H, 37, 48F
Currawong Forest Runner

Material examined. Holotype male, Currawong (33°36'S, 151°18'E, New South Wales, AUSTRALIA], 2 October 1966, R. Mascord (AM KS127760). Paratypes: 1 male, same data as holotype (AM KS48719).

Other material examined. Known only from type material.

Etymology. The specific epithet refers to the scientific genus-group name of the Australian Currawong birds, *Strepera* Lesson, 1831. Currawong is also the name of the type locality.

Diagnosis. Males of *A. strepera* sp. n. most closely resemble *A. bondi* sp. n. as both have a small, spoon-shaped tegular apophysis; however, the embolus and terminal apophysis in *A. strepera* sp. n. are much longer and protruding distinctly apically from the tegulum (Fig. 48F), in contrast to *A. bondi* sp. n. in which these are inconspicuous (Fig. 47D).

Description. Male (based on holotype AM KS127760; palea AM KS48719).

Total length 3.8.

Prosoma. Length 2.3, width 1.7; carapace light yellow-brown with indistinct dark radial pattern; indistinct and irregular broad lighter central band (Fig. 36E); sternum light brown, slightly dusted dark grey (Fig. 36F).

Eyes (Fig. 2A). Diameter of AME: 0.09; ALE: 0.07; PME: 0.30; PLE: 0.22.

Anterior eye row. Straight, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 36F).

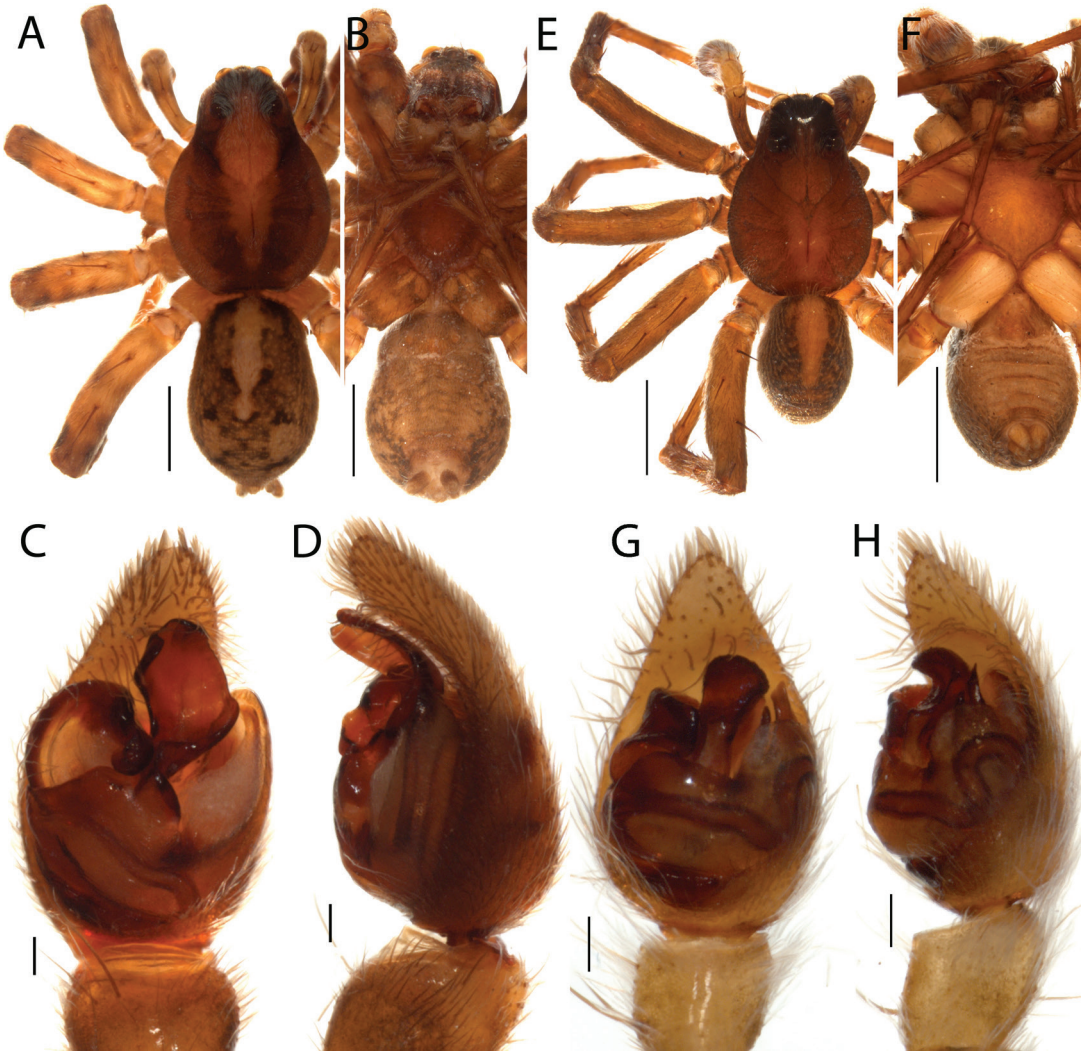

Figure 36. A–D, *Artoria slatyeri* sp. n., male holotype (AM KS127752), **E–H**, *A. strepera* sp. n., male holotype (AM KS127760): **A**, habitus, dorsal view; **B**, habitus, ventral view; **C**, male pedipalp, ventral view; **D**, male pedipalp, retrolateral view; **E**, habitus, dorsal view; **F**, habitus, ventral view; **G**, male pedipalp, ventral view; **H**, male pedipalp, retrolateral view. Scale bars: habitus 1.0 mm; pedipalp 0.1 mm

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 36F).

Legs. Yellow brown with no annulations; tibiae, metatarsi and tarsi darker (Fig. 36E).

Opisthosoma. Length 1.5, width 1.1; yellow-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern laterally (Fig. 36E). Venter yellow-brown dusted with grey (Fig. 36F); spinnerets pale.

Pedipalps. Tibia as long as broad; cymbium tip with 4–5 macrosetae (Fig.36G, H); dorsal scopula patch absent; tegular apophysis rectangular, distally scooped, basally narrowed to 1/2, tip rounded not reaching margin of cymbium (Fig. 36G); palea about as long as wide; basoembolic apophysis about as long as broad, triangular; embolus semicircular; terminal apophysis broad, tip triangular (Fig. 48F).

Female unknown.

Life history and habitat preferences. The habitat preferences of *A. strepera* sp. n. are unknown. The male types were found in spring (October).

Distribution. *Artoria strepera* sp. n. is currently known only from the type locality, Currawong, north of Sydney in the Sydney Basin (SYB) IBRA region (Fig. 37).

Artoria taeniifera Simon, 1909

Figs 1D, 37, 38A–H, 48G

Simon's Artoria

Artoria taeniifera Simon, 1909: 193–194, fig. 11. – Rainbow 1911: 275; Bonnet 1955: 751; McKay 1973: 380; McKay 1985: 74; Framenau 2002: 226–227, figs 21A-B, 22; Framenau 2005: 288–289: figs 13A–B, 14.

Artoriella taeniifera (Simon).- Roewer 1955: 233; Rower 1960: 563.

Material examined. Holotype female, Bunbury ('Station 142') (33°20'S 115°39'E, Western Australia, AUSTRALIA], collected during the 'Ham-

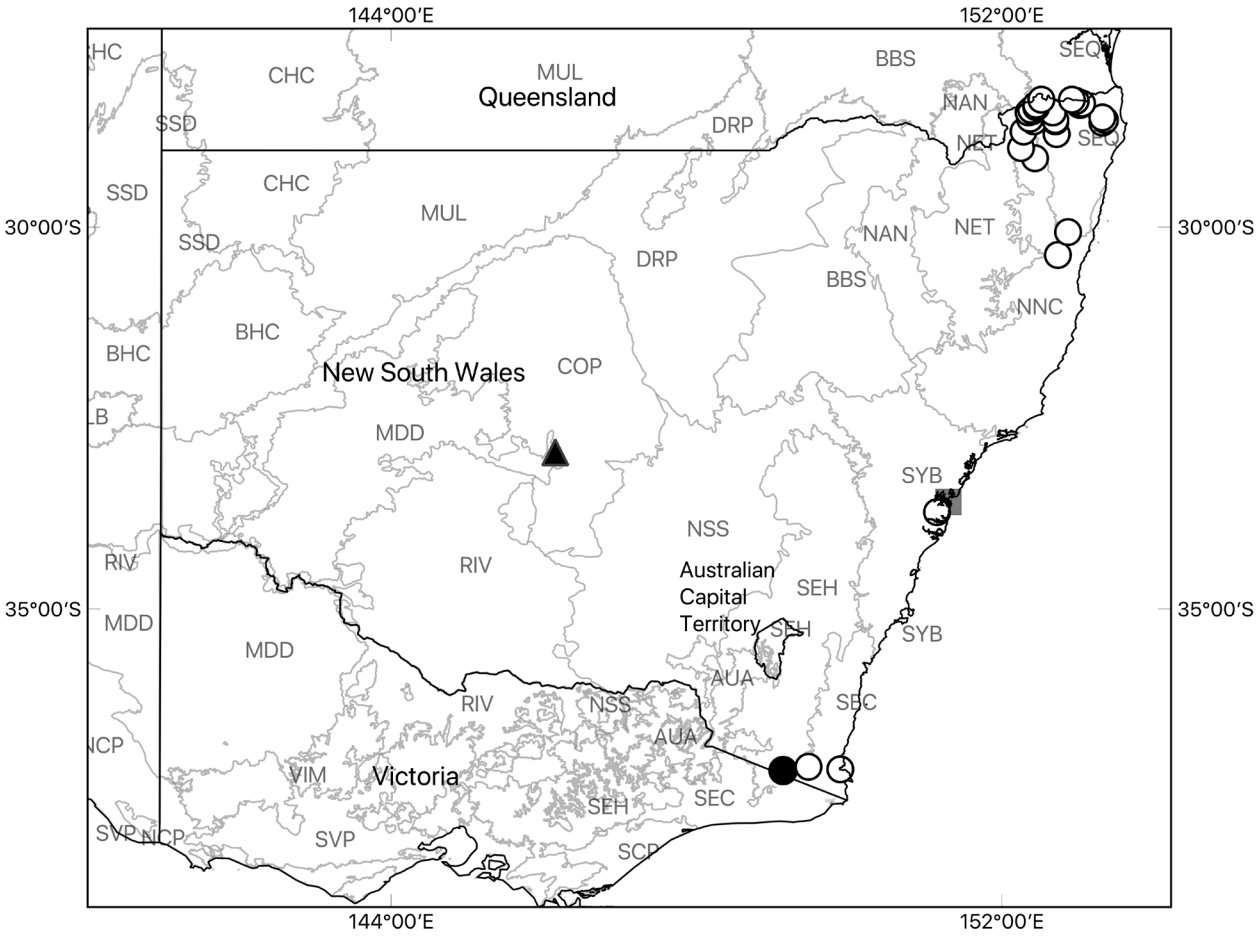

Figure 37. Distribution records of *Artoria slatyeri* sp. n. (full circle), *A. strepera* sp. n. (grey square), *A. taeniifera* Simon, 1909 (full triangle) and *A. terania* sp. n. (open circles) in NSW. IBRA bioregions with spider records: COP – Cobar Peneplain; MDD – Murray Darling Depression; NNC – NSW North Coast; SEQ – South East Queensland; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

burger südwest-australische Forschungsreise 1905' (ZMB 10549) (examined).

Other material examined. AUSTRALIA: New South Wales: 1 female, Round Hill, Euabalong, 32°57'S, 146°09'E (AM KS50283).

Diagnosis. The male of *A. taeniifera* is most similar to that of *A. belfordensis* sp. n. based on the structure of the basoembolic apophysis, which is basally drawn out into a tip or sharp edge and apically truncated. However, these species differ in the shape of the tegular apophysis, which is two-pronged in *A. taeniifera* and three lobed in *A. belfordensis* sp. n. The epigyne of female *A. taeniifera* is distinctive within *Artoria*, with its atrium semicircular along its anterior border and strongly sclerotised posterior edges that point medially.

Description. The female of *A. taeniifera* has been described in detail (Framenau 2002; 2005). A diagnosis and diagnostic images of the single female found in NSW (Figs 1D, 38C, D, G, H) are provided here to facilitate identification. The male is described for the first time based on a specimen collected in Nedlands (31°59'S, 115°48'E, Western Australia).

Male (based on WAM 98/2179).

Total length 4.8.

Prosoma. Length 2.6, width 2.0; carapace brown with darker radial pattern; light brown elongated V-shaped median band and indistinct light brown submarginal bands (Fig. 38A); sternum glabrous light brown (Fig. 38B).

Eyes. Diameter of AME: 0.09; ALE: 0.09; PME: 0.25; PLE: 0.21.

Anterior eye row. Strongly procurved, evenly spaced.

Chelicerae. Dark brown.

Labium. Brown, with lighter anterior rim (Fig. 38B)

Pedipalp coxae. Brown, with lighter anterior rim (Fig. 38B).

Legs. Yellow brown with darker annulations; tibiae, metatarsi and tarsi darker, less annulated (Fig. 38A).

Opisthosoma. Length 2.1, width 1.6; olive-brown with irregular darker pattern, centrally darker in particular in posterior half, light yellow-brown anterior cardiac mark (Fig. 38A). Venter pale yellow with darker central pattern (Fig. 38B); spinnerets dark grey.

Pedipalps. Tibia slightly longer than broad; cymbium apically with ca. 10 stronger setae (Fig. 38E, F); dorsal scopula patch absent; tegular apophysis distally two-pronged, (Fig. 38F); palea about twice as long as wide;

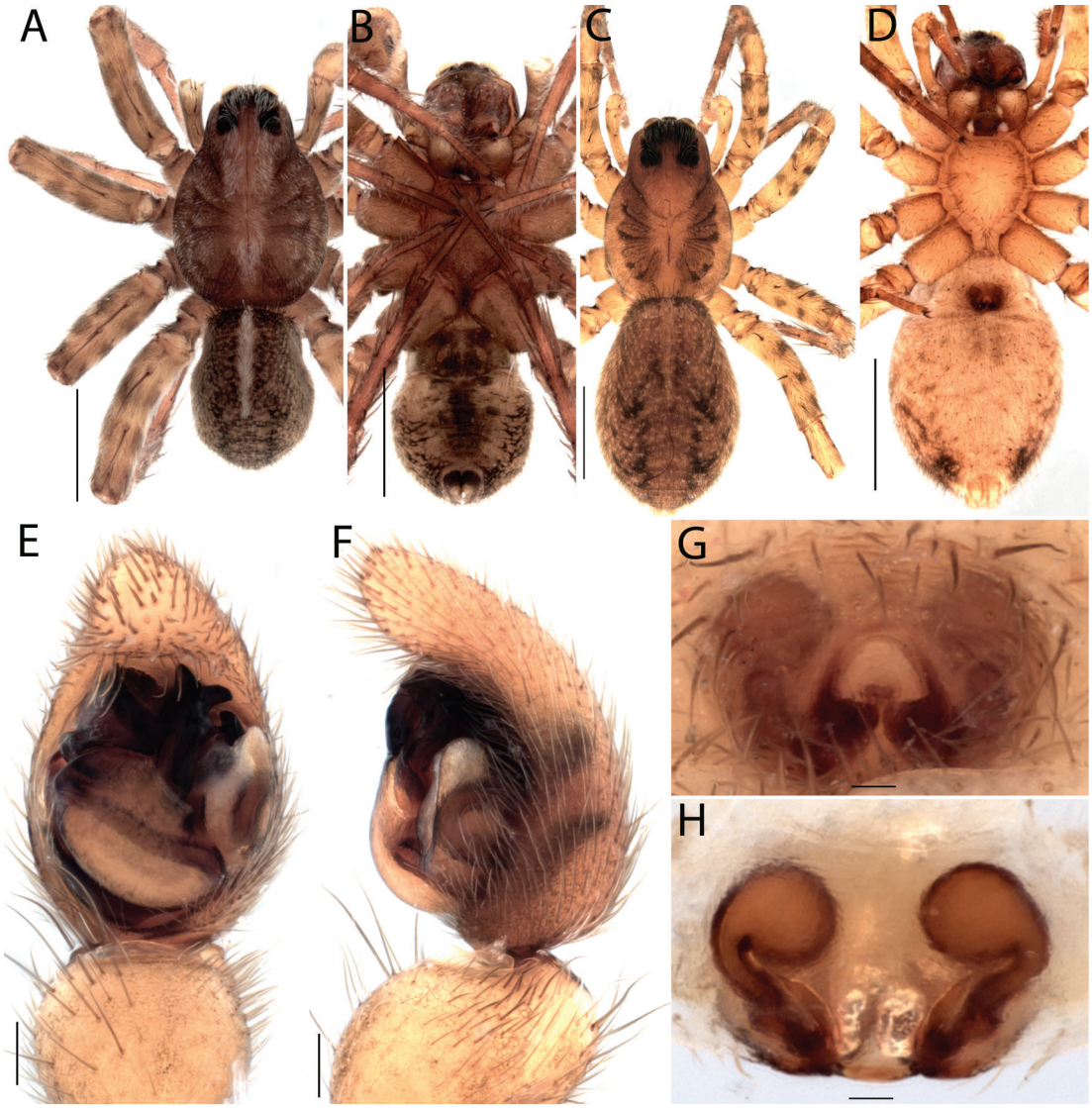

Figure 38. *Artoria taeniifera* Simon, 1909, male (WAM 98/2179), female (AM KS50283): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

basoembolic apophysis about long than broad and apically truncated; embolus apically with wide tip; terminal apophysis apically widely triangular and strongly sclerotised (Fig. 48G).

Life history and habitat preferences. The habitat of *A. taeniifera* in NSW is unknown. In Western Australia, from where most records of this species have been reported, *A. taeniifera* prefers open habitats such as coastal dunes, gardens and open woodlands. The single female from NSW was found in March suggesting the species to be autumn-mature. In south-western Western Australia, mature spiders have been found in winter and early spring.

Distribution. *Artoria taeniifera* has only been found once in NSW, centrally in the Cobar Plain (COP) IBRA region (Fig. 37). There is a second isolated record of the species in South Australia (Framenau, unpublished data). It is unknown if these represent persistent populations. The species occurs commonly in south-western Western Australia, from where it was initially described (Framenau 2002; 2005; unpublished data).

Artoria terania sp. n.

http://zoobank.org/8130F669-2E0E-48F8-9918-9B2FC8FDD27A

Figs 37, 39A–H, 48H

Terania Forest Runner

Material examined. Holotype male, Terania Creek, N of Lismore, (28°34'S, 153°19'E, New South Wales, AUSTRALIA), 30 April 1976, M.R. Gray, C. Horseman, litter, 340 m alt., rainforest survey site 52, FN767 (AM KS10351). Paratypes: 16 males, 1 female, Beaury State Forest, Koorelah Range, Quarry Road (28°30'54"S, 152°21'14"E, New South Wales, AUSTRALIA), 23 March– 9 May 1999, S. Lassau, C. Lemann, pitfall trap

(AM KS85226); 1 male, same data (ZSMH A0002172); 2 males, 5 females, 9 juv., Richmond Range State Forest, Tunners Road (28°37'33"S, 152°42'19"E, New South Wales, AUSTRALIA), 4 February – 9 April 1993, M. Gray, G. Cassis, pitfall trap, 560 m alt., NE NSW NPWS Survey, 04BM (AM KS36037); 1 female, same data (ZSMH A0002173).

Other material examined. 49 males, 59 females and 52 juveniles in 41 records (all NSW). **AUSTRALIA: New South Wales:** 1 male, 3 females, 14 juv., Beaury State Forest, Bennetts Road ca. 10 km NW Urbenville, 28°25'32"S, 152°27'46"E (AM KS36079); 2 males, 4 females, Beaury State Forest, N along Wallaby Creek, 28°26'24"S, 152°27'31"E (AM KS36089); 1 male, 1 female, Beaury State Forest, northwards along Wallaby Creek Road, 28°24'47"S, 152°27'49"E (AM KS36146); 2 females, Beaury State Forest, Tooloom Scrub, 28°35'S, 152°22'E (AM KS51274, KS51331); 1 female, Big Scrub Flora Reserve, Gibbergunyah Range Road, 150 m W of Rocky Creek Crossing, Whian Whian State Forest, 28°38'31"S, 153°19'57"E (AM KS35927); 2 males, 3 females, Big Scrub Flora Reserve, Gibbergunyah Range Road, 900 m NW of Rocky Creek crossing, Whian Whian State Forest, 28°38'15"S, 153°19'34"E (AM KS35925, KS35931); 2 males, Blue Gum Hut, via Mallanganee, 28°47'S, 152°43'E (QM S70133, S70140); 1 female, Border Ranges National Park, Tweed Range Road, 1.2 km N of Sheepstation Creek turnoff, 28°24'47"S, 153°01'50"E (AM KS35965); 5 males, 3 females, 1 juv., Border Ranges National Park, Tweed Range Road, 2 km SSW of junction with Bridle Creek Road, 28°23'52"S, 153°03'22"E (AM KS35975); 1 female, Border Ranges National Park, Tweed Range Road, 4.6 km SW of Brindle Creek Road, 28°24'25"S, 153°02'04"E (AM KS35956); 4 males, 3 females, 1 juv., Border Ranges National Park, Tweed Range Road. 500 m N of Sheepstation Creek Track, 28°24'51"S, 153°01'39"E (AM KS35940); 1 female, Cherry Tree North State Forest, 28°58'S, 152°15'E (AM KS51261); 1 male, Dorrigo National Park, Wonga Walk near Hardwood Lookout, 30°22'53"S, 152°44'00"E (AM KS35946); 1 female, Ewingar State Forest., Elkhorn Road, 29°06'29"S, 152°26'30"E (AM KS39712); 1 male, 3 females, 'Forster Kennels' (private land), 150 m from Failford Road and 400 m W of Failford, 32°05'33"S, 152°26'34"E (AM KS122622); 1 female, 7 juv., Gordon, 33°44'S, 151°9'E (AM KS10887); 2 females, Kangaroo River State Forest, 200 m E of a point 550 m along Burns Road, 30°04'36"S, 152°52'05"E (AM KS39713); 2 males, Mt Clunie, via Woodenbong, 28°20'S, 152°31'E (QM S70138-9); 1 female, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS99516); 7 males, 3 females, Nullica Beach, 37°06'S, 149°53'E (AM KS83721); 5 male, 6 females, Richmond Gap, 28°21'S, 152°58'E (QM S70124-32, S70134-5); 3 males, 2 females, 3 juv., Richmond Range State Forest, Goanna Creek Road, 0.4 km from junction with Sandy Creek Road, 28°37'14"S, 152°42'15"E (AM KS36001); 2 females, Richmond Range State Forest, Goanna Creek Road, 1.8 km from junction with Sandy Creek Road, 28°36'35"S, 152°42'04"E (AM KS35991); 1 female, Richmond Range State Forest, Gorge Creek Road, 28°20'S, 152°55'E (QM S41202); 1 female, Stydgy Creek, headwater, leasehold Land, 28°45'51"S, 152°17'31"E (AM KS37014); 1 male, 1 female, 4 juv., Terania Creek, N of Lismore, 28°34'S, 153°19'E (AM KS10353); 2 males, 1 female, 11 juv., Tooloom Scrub Flora Reserve, Urbenville-Legume Road, gully in middle of reserve, 28°28'30"S, 152°23'50"E (AM KS36119); 1 female, Tooloom Scrub, Beaury State Forest, 28°29'S, 152°24'E (QM S70141); 1 female, Tooloom Scrub, via Urbenville, 28°37'S, 152°25'E (QM S70136); 3 males, 1 female, Whian Whian State Forest, Nightcap Range, Junction of Rummery Road and Nightcap Range Road, 28°36'43"S, 153°21'47"E (AM KS85239); 4 males, 4 females, 2 juv., Yabbra State Forest, 28°30'S, 152°40'E (AM KS38414, KS38416–7, KS38422, KS122715).

Etymology. The specific epithet is a noun in apposition referring to the type locality, Terania Creek.

Diagnosis. Males of *A. terania* sp. n. most closely resemble those of *A. grahammilledgei* sp. n. based on the shape of the tegular apophysis, which is apically truncated (Fig. 39E) and not lobed as in *A. grahammilledgei* sp. n. (Fig. 22E). The epigyne has concave lateral edges resulting in it being twice as wide posteriorly than anteriorly (Fig. 39G).

Description. Male (based on holotype, AM KS10351).

Total length 5.4.

Prosoma. Length 3.0, width 2.3; carapace yellow-brown dusted with grey and indistinct dark radial pattern; lateral margin and central band pale yellow, broader in cephalic area and posterior margin (Fig. 39A); sternum yellow-brown, dusted dark grey (Fig. 39B).

Eyes. Diameter of AME: 0.10; ALE: 0.11; PME: 0.36; PLE: 0.29.

Anterior eye row. Slightly procurved, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 39B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 39B).

Legs. Yellow brown with darker annulations; tibiae, metatarsi and tarsi darker, less annulated (Fig. 39A).

Opisthosoma. Length 2.4, width 1.7; yellow-brown with light yellow-brown anterior cardiac mark and dark grey irregular pattern (Fig. 39A). Venter pale with darker pattern (Fig. 39B); spinnerets dark grey.

Pedipalps. Tibia longer as broad; cymbium tip without macrosetae (Fig. 39E, F); dorsal scopula patch present; tegular apophysis distally widely scooped, basally narrowed to 1/3, retrolateral tip hooked not reaching margin of cymbium (Fig. 39E); palea about twice as long as wide; basoembolic apophysis about as long as broad, triangular; embolus widely semicircular; terminal widely semicircular (Fig. 48H).

Female (based on AM KS85226).

Figure 39. *Artoria terania* sp. n., male holotype (AM KS10351), female paratype (AM KS85226): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** palp, ventral view; **F**, palp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Total length 5.6.

Prosoma. Length 2.9, width 2.1; carapace and sternum colouration as male (Fig. 39C).

Eyes. Diameter of AME 0.12, ALE 0.10, PME 0.34, PLE 0.28.

Anterior eye row. Straight, evenly spaced.

Chelicerae, labium, Pedipalp coxae, legs and *opisthosoma*. Opisthosoma length 2.7, width 2.1; otherwise as male, but opisthosoma pattern more obscure (Fig. 39C, D).

Epigyne. Atrium bell-shaped with rectangular anterior margin (Fig. 39G); spermathecal heads ellipsoid less than 1/2 diameter apart, spermathecal stalks short (Fig. 39H).

Life history and habitat preferences. Habitat descriptions on locality labels of *A. terania* sp. n. include ‘rainforest’, ‘microphyll vine forest’, ‘dry rainforest’ and ‘Hoop Pine plantation’, where the species seems to be litter-dwelling.

Mature males of *A. terania* sp. n. were mostly found in April and October, suggesting two reproductive periods. Females were found from December to May with a peak in April, but also in October.

Distribution. *Artoria terania* sp. n. has been mostly found in north-eastern NSW in the NSW North Coast (NNC) and South Eastern Queensland (SEQ) IBRA regions,

with isolated records around Sydney (Sydney Basin – SYB) and in the south-east of the state (South East Corner – SEC) (Fig. 37). This species has also been found in south-eastern Queensland (V.W. Framenau, unpublished data).

Artoria triangularis Framenau, 2002

Figs 40A–H, 41, 46K

Triangular Forest Runner

Artoria triangularis Framenau, 2002: 227–228, figs 23A–E, 24.

Material examined. Holotype male, Avon River near Valencia Creek (37°48'S 146°27'E, Victoria, AUSTRALIA], 3–17 September 1997, riparian sclerophyll forest, pitfall trap, V.W. Framenau (NMV K7481) (examined).

Other material examined. 60 males and 61 females in 66 records (all NSW). **AUSTRALIA: New South Wales:** 2 females, 14.5 km NW of Corowa, 35°54'33"S, 146°16'11"E (AM KS84950); 20 males, 1 female, 4 km NE of Mt Wog Wog, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (AM KS99035, KS99096, KS128883, KS128882, KS128557); 1 female, Ballengarra State Forest, 2 km S of Ballengarra Creek crossing on Greys Road, 31°14'48"S, 152°45'53"E (AM KS39729); 1 male, 2 females, Bargo River, 34°20'S, 150°32'E (AM KS86687); 1 female, Bodalla State Forest, 1.5 km W of Potato Point, 36°05'56"S, 150°06'50"E (AM KS64395); 10 males, 1 female, Bondi State Forest, S of Bombala, Woodlot 1, 37°08'S, 149°9'E (AM KS11018, KS11057, KS11145, KS15208, KS15213, KS15217–9, KS15220, KS15223, KS15225–6, KS15238–9, KS18058); 4 males, Bondi State Forest, S of Bombala, Woodlot 2, 37°07'S, 149°08'E (AM KS70256, KS70271); 2 females, Carrai State Forest, 31°00'19"S, 152°16'24"E (AM KS12323, KS128556); 1 female, Columbey National Park, 180 m off Clarence Town Road and 5 km SW of Clarence Town, 32°35'54"S, 151°43'58"E (AM KS122890); 1 female, Danabilla Nature Reserve, 34°12'40"S, 148°28'31"E (AM KS114863); 2 females, Danabilla Nature Reserve, 34°10'40"S, 148°30'15"E (AM KS117680); 3 females, Danabilla Nature Reserve, 34°12'47"S, 148°28'21"E (AM KS117679); 2 females, 'Fairfield Farm', 29 km NE of Mulwala, 35°47'47"S, 146°13'17"E (AM KS84338, KS84792); 1 female, Frying Pan, 36°9'S, 148°50'E (AM KS53674); 1 female, Gubatta, 33°35'03"S, 146°36'43"E (QM S53147); 3 females, Jamieson Park, Narrabeen, 33°43'S, 151°18'E (AM KS49607); 3 females, 'Kildonan' Farm, 19 km S of Berrigan, 35°50'11"S, 145°49'47"E (AM KS84605, KS84607); 2 females, 'Kilyana' Station, 19.5 km SE of Berrigan, 35°47'10"S, 145°47'34"E (AM KS84152, KS85019); 3 females, Koorawatha Nature Reserve, 34°01'44"S, 148°35'57"E (AM KS114864); 6 males, 7 females, Mt Wog Wog, 4 km NE, 17 km SE Bombala, 37°04'30"S, 149°28'00"E (WAM T64892, T64899, T64905); 3 males, 1 female, Munmorah State Recreation Area, 33°12'34"S, 151°34'59"E (AM KS61973, KS62074, KS62076); 2 males, Myall Lakes National Park, 32°30'26"S, 152°21'55"E (AM KS61970, KS62077); 4 males, 2 females, Nullica Beach, 37°06'S, 149°53'E (AM KS83716, KS83720–1); 1 female, Oxley Wild Rivers National Park, 57 km SE of Armidale, East Kunderang Road, 30°49'18"S, 152°02'10"E (AM KS124304); 1 female, Putty State Forest, approx. 30 m from road, 32°42'49"S, 150°37'34"E (AM KS122291); 1 female, Redlands Hill Reserve, 10 km NNW of Corowa, 35°55'16"S, 146°19'22"E (AM KS84494); 4 female, Taleeban, 33°57'58"S, 146°27'06"E (QM S53178, S53310); 1 female, Wahroonga Fraser Reserve, 33°43'S, 151°08'E (AM KS57286); 1 female, Warra State Forest, Moggs Swamp Creek, Moggs Swamp Fire Trail, 29°58'47"S, 151°58'29"E (AM KS36969); 4 females, Warra State Forest, Moggs Swamp Fire Trail, 2.5 km N of Moggs Swamp Creek, 29°57'32"S, 151°58'18"E (AM KS39964); 1 female, Watagan State Forest, approx. 130 m from Watagan Creek Road and 14 km SE of Laguna, 33°01'50"S, 151°16'32"E (AM KS122928); 1 female, Winterbourne State Forest, 30°55'15"S, 151°52'15"E (AM KS89966); 1 female, Wollemi National Park, 700 m from Thompsons Road and 2 km north of Milbrodale, 32°40'25"S, 151°00'27"E (AM KS122380); 1 female, Woolwick, 33°50'S, 151°10'E (WAM T56171).

Diagnosis. The tegular apophysis of the male pedipalp is distinctive in *A. triangularis* in that it is almost straight and pointed apically (Fig. 46K). The epigyne of females has a shallow indentation posteriorly and two incisions laterally (Fig. 40G).

Description. *Artoria triangularis* has been described in detail (Framenau 2002). A diagnosis and diagnostic images (Figs 40A–H, 46K) are provided here to facilitate identification.

Life history and habitat preferences. In NSW, *A. triangularis* has mostly been found in open forests and woodlands, with two records from spinifex grassland and one from a road verge.

Mature males were generally found in October and November, with two records from May. Females were also most often encountered in October and November, but were also found in January, March–May and July. *Artoria triangularis* therefore appears largely spring-mature.

Distribution. In NSW, *A. triangularis* has been found east and west of the Great Dividing Range. In the west, it reaches into the NSW South Western Slopes (NSS), Cobar Peneplain (COP) and Riverina (RIV) IBRA regions (Fig. 41). The species is also widespread in Victoria, southern South Australia and has been sporadically found in Queensland and Tasmania (Framenau 2002; 2005; unpublished data).

Artoria ulrichi Framenau, 2002

Figs 41, 42A–H, 46B

Ulrich's Forest Runner

Artoria ulrichi Framenau, 2002: 228–229, figs 25A–F, 26.

Material examined. Holotype male, Gerringong 'Scalloway'' (34°45'S 150°50'E, New South Wales), 18 Novem-

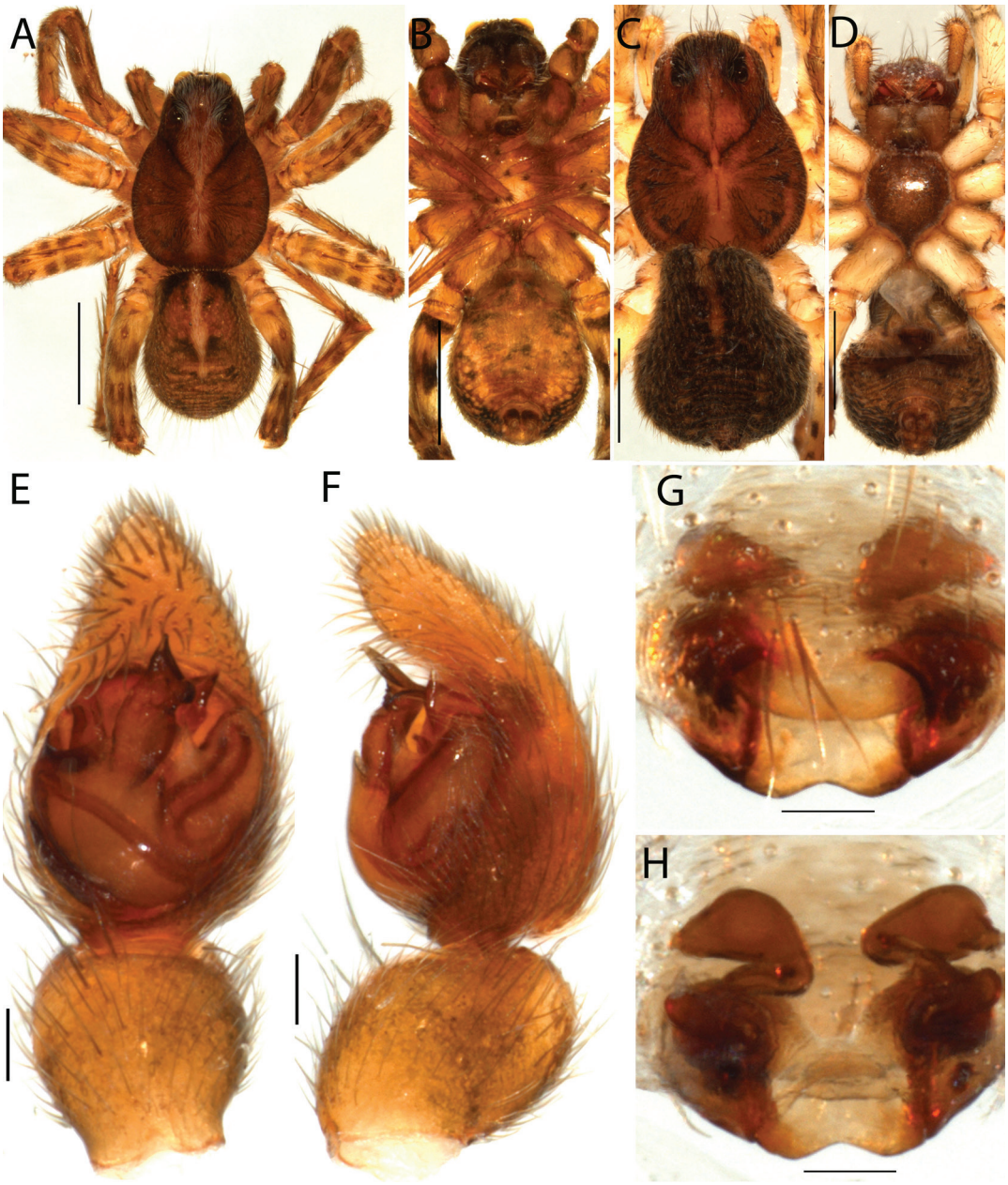

Figure 40. *Artoria triangularis* Framenau, 2002, male (AM KS99035), female (AM KS117679): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, female pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

ber 1986, G. Wishart (AM KS17397). Paratype: 1 female, same data as holotype (AM KS75634) (both examined).

Other material examined. 28 males, 12 females and 3 juveniles in 13 records (all NSW). **AUSTRALIA: New South Wales:** 1 male, Cambewarra Mt, 6 miles N by W of Nowra, 34°47'S, 150°35'E (ANIC); 2 females, Mt Boss State Forest, Banda Road, 1.2 km E of Hastings Forest Highway, 30°10'05"S, 152°24'03"E (AM KS39802); 2 females, Mt Boss State Forest, Banda Road, 4.5 km E of Hastings Forest Highway, 31°9'39"S, 152°25'14"E (AM KS39801); 2 males, 1 female, `Scalloway`, Gerringong, 34°45'S, 150°50'E (AM KS17438, KS31730); 1 female, `Scalloway`, Willowvale, 34°44'S, 150°48'E (AM KS31717); 1 male, 'Wombat Hilltop', private land, 33°00'53"S, 149°52'34"E (AM KS122792); 1 male, Vineyard 'Yarraman Estate', 1 km off Yarraman Road and 1 km southwest of Wybong, 32°16'11"S, 150°37'25"E (AM KS122600); 3 females, Washpool National Park, Track off Cedar Trail, 29°28'29"S, 152°20'53"E (AM KS37048); 2 females, 1 juv., Washpool State Forest, 29°16'S, 152°22'E (AM KS38757, KS38761); 23 males, 1 female, 2 juv., Willowvale near Gerringong, 34°44'S, 150°48'E (AM KS4316).

Diagnosis. *Artoria ulrichi* is part of the *lineata*-group, to which also *A. lineata* and *A. quadrata* belong. A detailed diagnosis for these three species can be found above under the treatment of *A. lineata*.

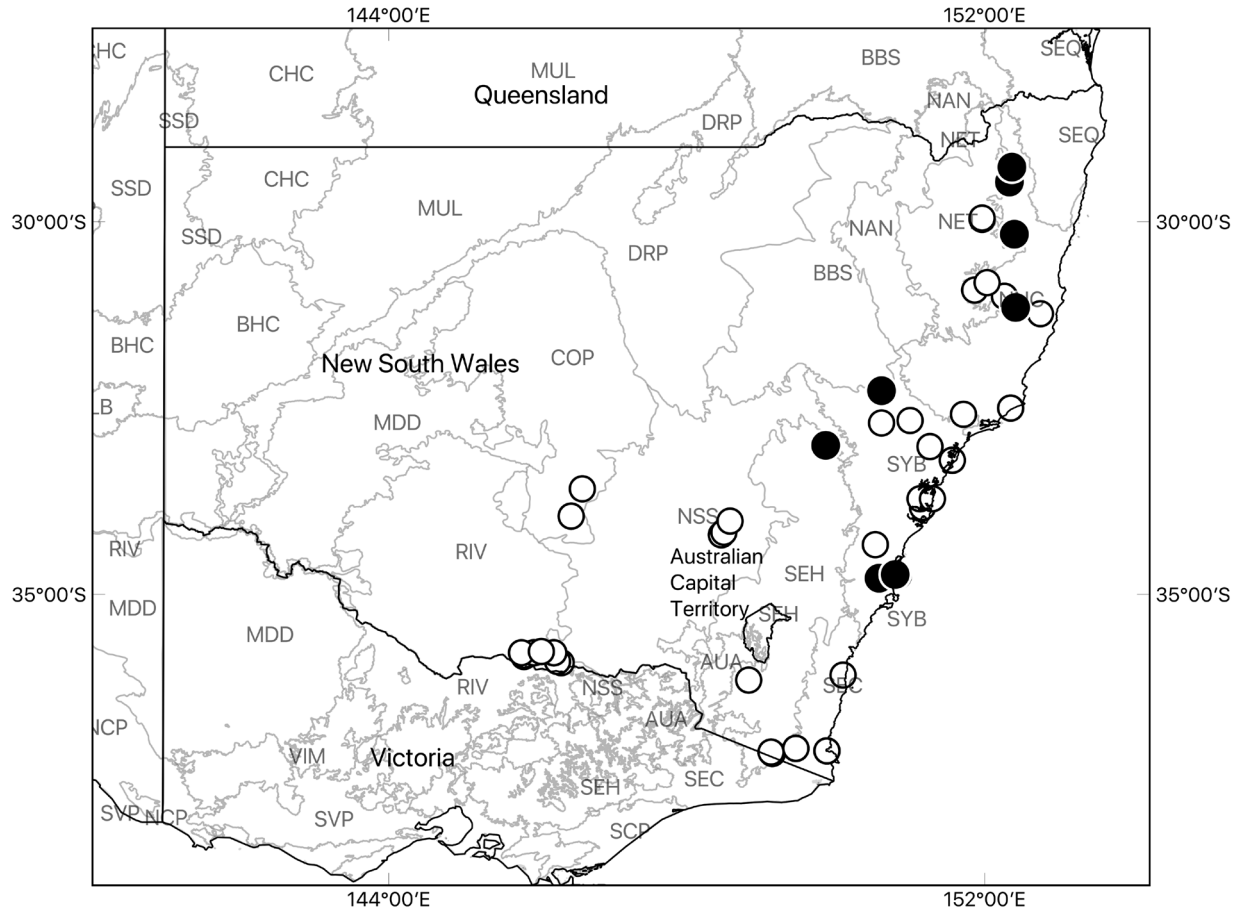

Figure 41. Distribution records of *Artoria triangularis* Framenau, 2002 (open circles) and *A. ulrichi* Framenau, 2002 (full circles) in NSW. IBRA bioregions with spider records: COP – Cobar Peneplain; NET New England Tablelands; NNC – NSW North Coast; NSS – NSW South Western Slopes; RIV – Riverina; SEH – South Eastern Highlands; SEC – South East Corner; SYB – Sydney Basin.

Description. *Artoria ulrichi* has been described in detail (Framenau 2002). A diagnosis and diagnostic images (Figs 42A–H, 46B) are provided here to facilitate identification.

Life history and habitat preferences. In NSW, *A. ulrichi* has been found in forest habitats, including rainforests. Mature spiders were found from November through to June.

Distribution. In NSW, *A. ulrichi* has been found east and west of the Great Dividing Range in the NSW North Coast (NNC), Sydney Basin (SYB) and South Eastern Highlands (SHE) IBRA regions (Fig. 41). There is also a single record from Victoria (Framenau 2002).

Artoria victoriensis Framenau, Gotch & Austin, 2006

Figs 43A–H, 44, 46I

Victorian Artoria

Artoria victoriensis Framenau, Gotch & Austin, 2006: 28–32, figs 63–70.

Material examined. Holotype male, Melbourne (37°49’S, 144°58’E, Victoria, AUSTRALIA), 8 October 1956, A Neboiss (NMV K7742). Paratype: 1 female, Kilsyth, 37°48’S 145°19’E, Victoria, AUSTRALIA), 11 October 1981, on fence, M. E. Roberts (NMV K7741) (both examined).

Other material examined. 91 males, 59 females and 8 juveniles in 79 records (all NSW). **AUSTRALLIA**: **New South Wales:** 1 male, ‘Ashleigh Park’ Farm, 21 km S of Berrigan, 35°51’12”S, 145°49’17”E (AM KS84510); 18 males, 14.5 km NW of Corowa, 35°54’33”S, 146°16’11”E (AM KS84456, KS84462); 1 male, 14.5 km NW of Corowa, 35°54’33”S, 146°16’11”E (AM KS84391); 3 males, 23 km NW of Mulwala, 35°49’22”S, 146°9’02”E (AM KS84165, KS84941, KS85045); 1 male, 26 km NW of Mulwala, 35°46’22”S, 146°05’52”E (AM KS84194); 1 female, Blue Mountains National Park, Binnawee Drive, 33°40’15”S, 150°27’55”E (AM KS53789); 1 female, Coleambally irrigation area, 34°42’10”S, 146°02’55”E (AM KS67764); 1 female, Coleambally irrigation area, 34°53’00”S, 144°59’24”E (AM KS58090); 1 female, Coleambally irrigation area, 34°54’00”S, 146°03’44”E (AM KS58311); 2 females, Coleambally irrigation area, 34°54’27”S, 146°00’10”E (AM KS67342); 1 male, 3 females, Coleambally irrigation area, 34°54’27”S, 146°00’14”E (AM KS67152, KS67684, KS71271); 6

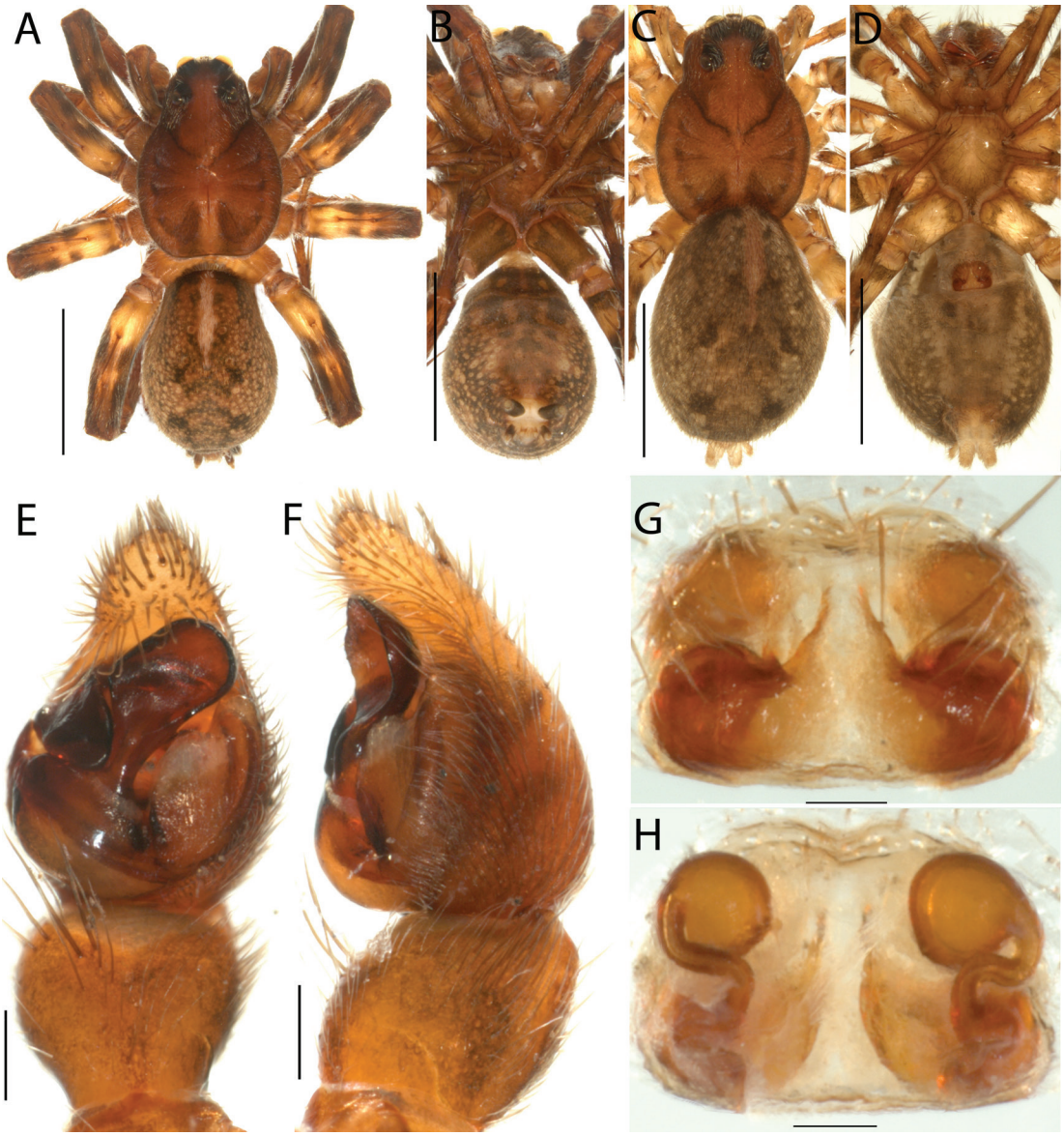

Figure 42. *Artoria ulrichi* Framenau, 2002, male and female (AM KS4316): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

males, 8 females, 1 juv. Coleambally irrigation area, 34°55’03”S, 145°51’37”E (AM KS58164, KS67076, KS67506, KS68662); 13 males, 2 females, Coleambally irrigation area, 34°58’00”S, 146°00’50”E (AM KS67348, KS67354, KS67412, KS67678); 9 male, 5 females, Coleambally irrigation area, 34°59’35”S, 146°00’44”E (AM KS58127, KS58183, KS58235, KS67674); 1 male, 5 females, Coleambally irrigation area, 35°01’59”S, 145°55’04”E (AM KS68649, KS68654); 2 males, Crown residency, corner of New England Highway and Old Tamworth Road, 31°04’30”S, 151°01’40”E (AM KS82846, KS82854); 1 male, ‘Cullen Hill’ Farm, 24 km NE of Mulwala, 35°35’46”S, 146°03’12”E (AM KS85008); 1 male, ‘Cullen Hill’ Farm, 24 km NE of Mulwala, 35°46’58”S, 146°03’12”E (AM KS84682); 1 female, Eden, 37°03’S, 149°54’E (WAM T62638); 2 males, ‘Fairfield’ Farm, 29 km NE of Mulwala, 35°47’47”S, 146°13’17”E (AM KS84484, KS84791); 1 male, ‘Fairfield’ Farm, 30.5 km NE of Mulwala, 35°47’36”S, 146°14’46”E (AM KS84512); 1 male, 2 females, Gilgandra, 39 km NNW, turnoff to Warrumbungle National Park, 31°25’9”S, 148°31’19”E (AM KS76597–8, KS76600); 1 female, Gin Gin, 2.5 km NW, on road to Riverview Station, 31°54’13”S, 148°03’41”E (AM KS76601); 1 female, Gubatta, 33°34’05”S, 146°35’36”E (QM S53583); 2 females, Humbug Creek, 8 km SW West Wyalong, 33°59’S, 147°10’E (QM S46699); 2 females, 7 juv., Kanangra-Boyd National Park, Blood Filly Creek near Jenolan Caves, 33°51’S, 150°03’E (AM KS29969–70); 3 males, ‘Kildonan’ Farm, 19 km S of Berrigan, 35°50’11”S, 145°49’47”E (AM KS84608, KS84612, KS84630); 3 males, 3 females, ‘Kilyana’ Station, 21.5 km SE of Berrigan, 35°48’00”S, 145°58’09”E (AM KS84744, KS84991,

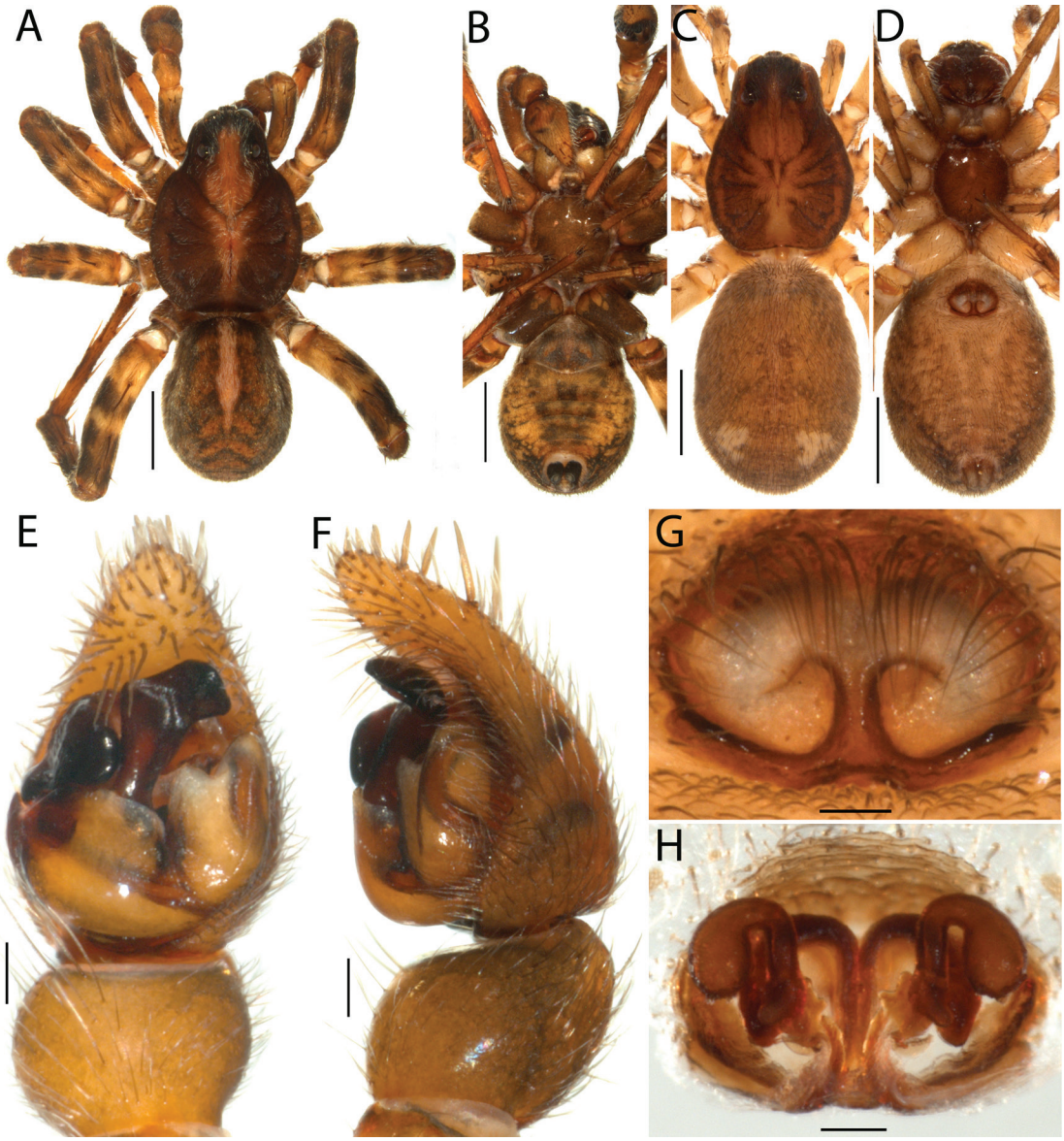

Figure 43. *Artoria victoriensis* Framenau, Gotch & Austin, 2006, male (AM KS84363) and female (AM KS84744): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

KS84999); 1 male, 'Kilyana' Station,19.5 km NW of Mulwala, 35°49'01"S, 145°58'28"E (AM KS84473); 1 male, 'Kilpa' Farm, 17.5 km SE of Berrigan, 35°45'51"S, 145°57'15"E (AM KS84635); 1 male, Kwiambal National Park, east side, 150 m S of road, 29°10'46"S, 151°00'18"E (AM KS82858); 1 male, 1 female, McIntyre River, 2.8 km South of Boggabilla on Bruxner Highway, 28°37'41"S, 150°22'30"E (AM KS76603, KS76605); 1 female, Moree, 29°27'S, 149°50'E (AM KS32588); 9 males, 'Namron Park' Farm, 12 km NNW of Mulwala, 35°53'01"S, 145°57'40"E (AM KS84363, KS84383, KS84546); 2 females, New England National Park, opposite Tom's Cabin, 30°29'55"S, 152°23'51"E (AM KS91019); 2 males, 'Oakbank' Farm, 24 km NE of Mulwala, 35°47'57"S, 146°07'08"E (AM KS84136); 1 male, 1 female, Pulletop, 34°01'49"S, 146°04'20"E (QM S53058); 1 male, Pulletop, 34°00'59"S, 146°04'15"E (QM S53690); 1 female, Oxley Wild Rivers National Park, Apsley River, below Yarrowitch River, 30°52'50"S, 152°01'12"E (AM KS124562); 1 male, 1 female, Quarantine Bay, 37°03'S, 149°52'E (WAM T70670); 2 males, Redlands Hill Reserve, 10 km NNW of Corowa, 35°55'16"S, 146°19'22"E (AM KS84191); 1 male, 'Savernake' Station, 23.5 km N of Mulwala, 35°46'59"S, 146°01'46"E (AM KS84936); 1 female, Shoalhaven River at Bombay Bridge, 35°25'42"S, 149°42'57"E (AM KS125947); 1 female, Wahgunyah State Forest 15.5 km N of Mulwala, 35°51'12"S, 145°59'05"E (AM KS84450); 1 male, 6 females, Wambianna Station, 7.5 km NW Gin Gin, 31°52'27"S, 148°01'36"E (AM KS76599, KS76602, KS76604, KS76606, KS76704); 1

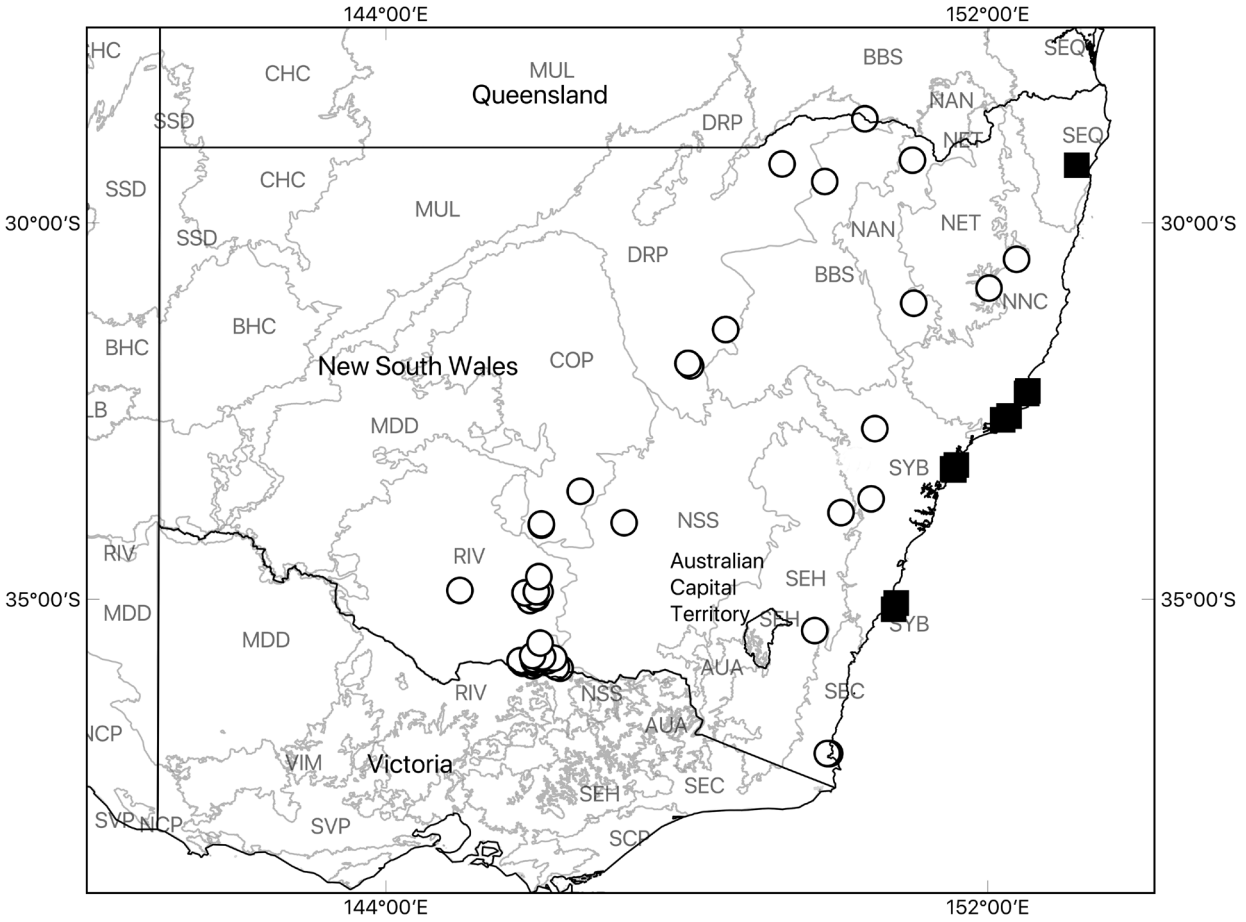

Figure 44. Distribution records of *Artoria victoriensis* Framenau, Gotch & Austin, 2006 (open circles) and *A. wilkiei* sp. n. (full squares) in NSW. IBRA bioregions with spider records: BBS – Brigalow Belt South; DRP – Darling Riverine Plains; COP – Cobar Peneplain; NAN – Nandewar; NNC – NSW North Coast; NSS – NSW South Western Slopes; RIV – Riverina; SEH – South Eastern Highlands; SEC – South East Corner; SEQ – South East Queensland; SYB – Sydney Basin.

female, Weemelah, South of, 150 m North of bridge over Gingham Watercourse, 29°13’30”S, 149°16’04”E (AM KS76706); 1 male, ‘Womboyne’ Farm, 19 km S of Berrigan, 35°49’35”S, 145°47’03”E (AM KS84767).

Diagnosis (after Framenau et al. 2006). Males of *A. victoriensis* can be distinguished from all other Australian *Artoria* by the shape of the median apophysis which resembles an upside-down sock in ventral view. The female epigyne is distinctively oval, with a white center and a sclerotized posterior rim reaching medially into this center.

The specimens illustrated here vary somewhat from those originally described, in particular with respect to the internal female genitalia. It is possible, that *A. victoriensis* may include more than one species pending a more detailed evaluation of its intraspecific variation across its wider range.

Description. *Artoria victoriensis* has been described in detail (Framenau et al. 2006). A diagnosis and diagnostic images (Figs 43A–H, 46I) are provided here to facilitate identification.

Life history and habitat preferences. *Artoria victoriensis* can typically be found in open, moderately moist habitats, including suburban garden and parks.

Males of the species were predominantly found from October to December, with a single record from April. Female activity is similar, although mature females are not uncommon in the later summer months.

Distribution. In NSW, *A. victoriensis* has been found mainly east of the Great Dividing Range where it occurs into the Darling Riverine Plains (DRP), Cobar Peneplain (COP) and Riverina (RIV) IBRA regions (Fig. 44). The species has also been found throughout South Australia, Victoria and Tasmania and into south-eastern Queensland (Framenau et al. 2006; Framenau unpublished data).

Artoria wilkiei sp. n.

http://zoobank.org/AD26CDBD-8081-4E4B-905E-FF2F2CDB068F

Figs 44, 45A–H, 48I

Wilkie’s Coastal Runner

Material examined. Holotype male, Wyrrabalong National Park (33°16’48”S, 151°32’45”E, New South Wales, AUSTRALIA), 2 June 1997, L. Wilkie, pitfall trap (AM KS128072). Paratypes: 1 male, same data as holotype (AM KS62060). 1 male, 1 female, Beecroft

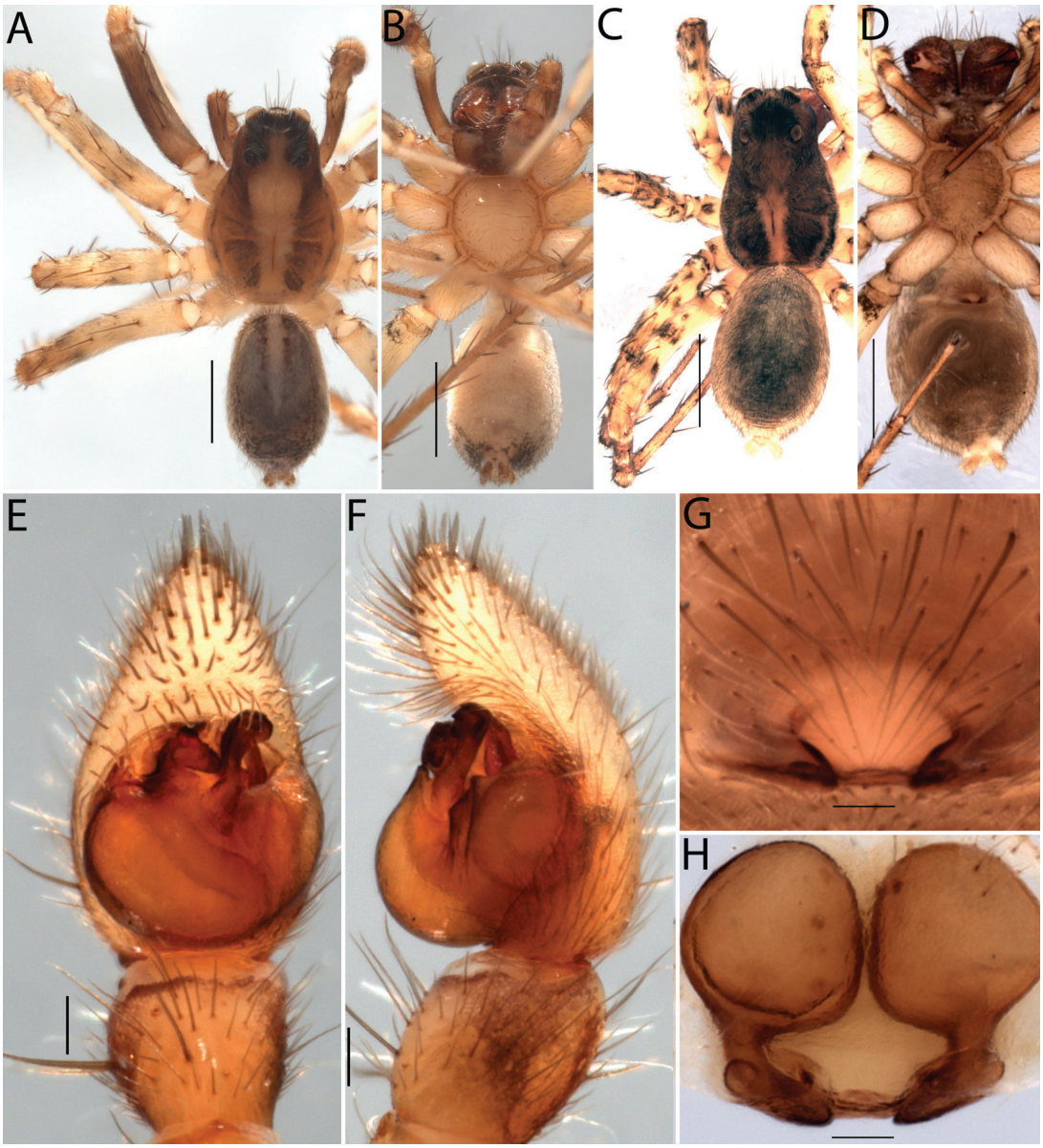

Figure 45. *Artoria wilkiei* sp. n., male holotype (AM KS128072), female paratype (AM KS63496): **A**, male habitus, dorsal view; **B**, male habitus, ventral view; **C**, female habitus, dorsal view; **D**, female habitus, ventral view; **E,** male pedipalp, ventral view; **F**, male pedipalp, retrolateral view; **G**, epigyne, ventral view; **H**, epigyne, dorsal view. Scale bars: habitus 1.0 mm; pedipalp, epigyne 0.1 mm.

Peninsula, northern headland of Jervis Bay (35°03'03"S, 150°47'21"E, New South Wales, AUSTRALIA), 10 June 1999, pitfall trap, L. Gibson (AM KS63496); 2 males, Beecroft Peninsula, northern headland of Jervis Bay (35°03'03"S, 150°47'21"E, New South Wales, AUSTRALIA), 20 August 1999, pitfall trap, L. Gibson, (AM KS63508); 1 male, same data (ZMH A0002174).

Other material examined. 32 males, 1 female in 26 records (all NSW). **AUSTRALIA: New South Wales:** 1 male, Booderee National Park, southern headland of Jervis Bay, 35°08'49"S, 150°45'05"E (AM KS62999); 5 males, Booti Booti National Park, 32°16'S, 152°31'E (AM KS50514, KS50684, KS50686, KS50689); 2 males, Booti Booti National Park, 32°14'28"S, 152°32'50"E (AM KS63919, KS63921); 3 males, Booti Booti National Park, south of Forster - northern end of dirt track to Jane's Corner, 32°14'28"S, 152°32'50"E (AM KS62063–4, KS62070); 1 male, Doubleduke State Forest, junction of Range Road & Lockleys Road, 29°14'04"S, 153°11'10"E (AM KS39702); 2 males, Munmorah State Recreation Area, first access track to beach from southern entrance to park, 33°13'23"S, 151°35'01"E (AM KS62061–2); 6 males, Myall Lakes National Park, 3.8km South of Mungo Brush campsite, 32°34'46"S, 152°17'27"E (AM KS62057–8, KS62069, KS62071); 4 males, Myall Lakes National Park, Lemontree Beach access, 32°37'56"S, 152°12'28"E (AM KS62066–7, KS62072); 1 male, Wyrrabalong National Park, 33°16'44"S, 151°32'51"E (AM KS63918); 1 male, Wyrrabalong National Park, 33°16'47"S, 151°32'40"E (AM KS62068); 1 male, Wyr-

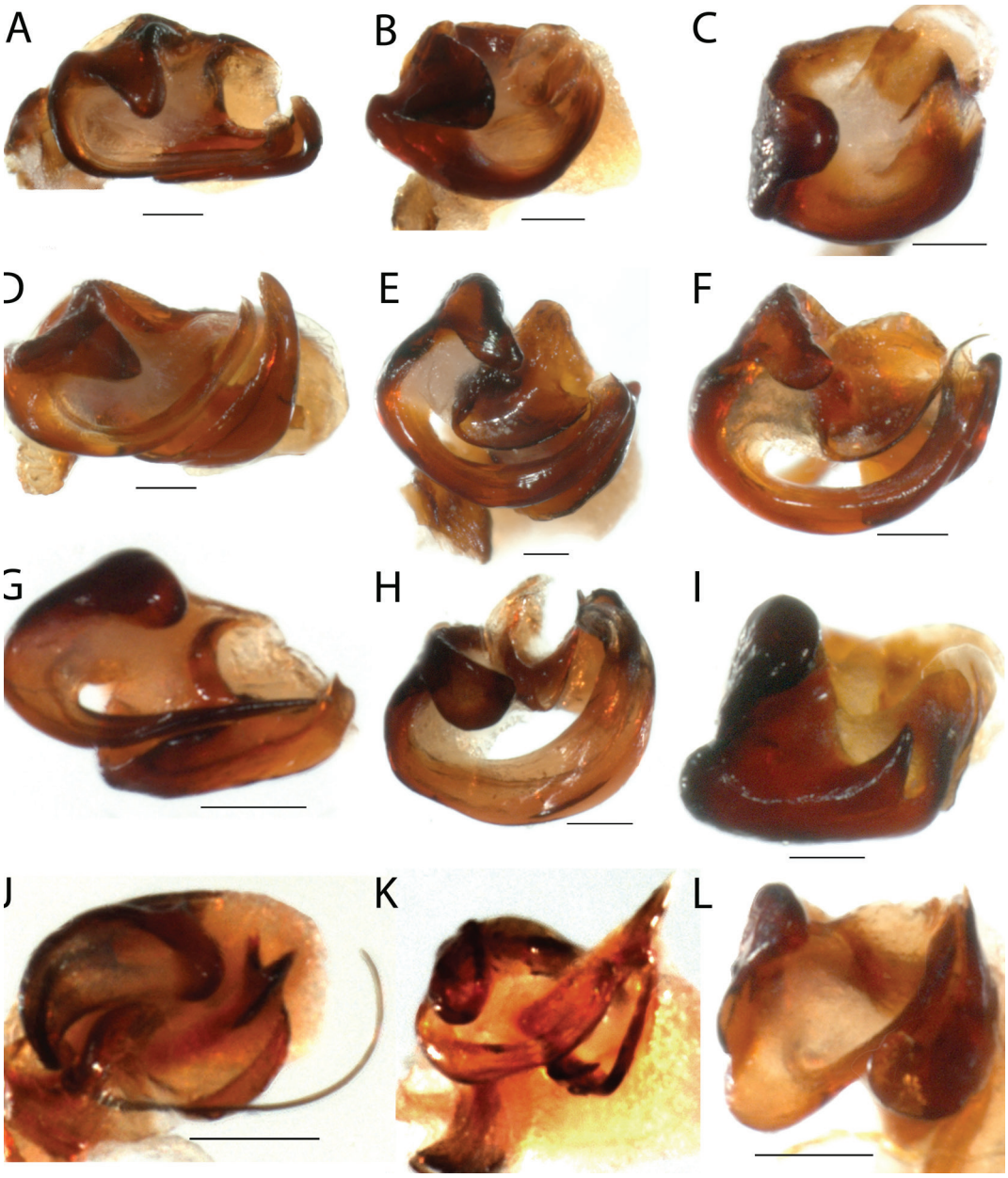

Figure 46. *Artoria* spp., palea of male pedipalp, ventral view: **A**, *A. lineata* (L. Koch, 1877) (AM KS21673); **B**, *A. ulrichi* Framenau, 2002 (AM KS4316); **C**, *A. quadrata* Framenau, 2002 (AM KS61739); **D**, *A. flavimana* Simon, 1909 (AM KS52091); **E,** *A. gloriosa* (Rainbow, 1920) (AM KS84008); **F**, *A. albopilata* (Urquhart, 1893) (AM KS116121); **G**, *A. mckayi* Framenau, 2002 (AM KS45830); **H**, *A. berenice* (L. Koch, 1877) (AM KS75080) **I**, *A. victoriensis* Framenau, Gotch & Austin, 2006 (AM KS843630); **J**, *A. howquaensis* Framenau, 2002 (AM KS82788); **K**, *A. triangularis* Framenau, 2002 (AM KS99035); **L**, *A. alta* Framenau, 2004 (AM KS45825). Scale bars: 0.1 mm.

rabalong National Park, 33°16’51”S, 151°32’37”E (AM KS62056); 1 male, Wyrrabalong National Park, along track through old carpark area at northern end of park, 33°17’37”S, 151°33’38”E (AM KS62059).

Etymology. The specific epithet is a patronym in honour of Mr Lance Wilkie, who collected the holotype.

Diagnosis. The pedipalp morphology in males of *A. wilkiei* sp. n. is most similar to that of *A. barringtonensis* sp. n. and *A. bondi* sp. n. based on the small, spoon-shaped tegular apophysis. However, *A. wilkiei* sp. n. is the only species amongst these in which the tegular apophysis has a small tooth pointing ventrally, visible in retrolateral view (Fig. 45F). The female epigyne of *A. wilkiei* sp. n. is similar to that of *A. mungo* sp. n., but the spermathecal heads are much larger and touch medially.

Description. Male (based on holotype AM KS128072). Total length 4.3.

Prosoma. Length 2.3, width 1.7; carapace yellow-brown dusted with grey and indistinct light radial pattern; lateral margin and central band pale yellow, broader in cephalic area (Fig. 45A); sternum pale, with darker margin (Fig. 45B).

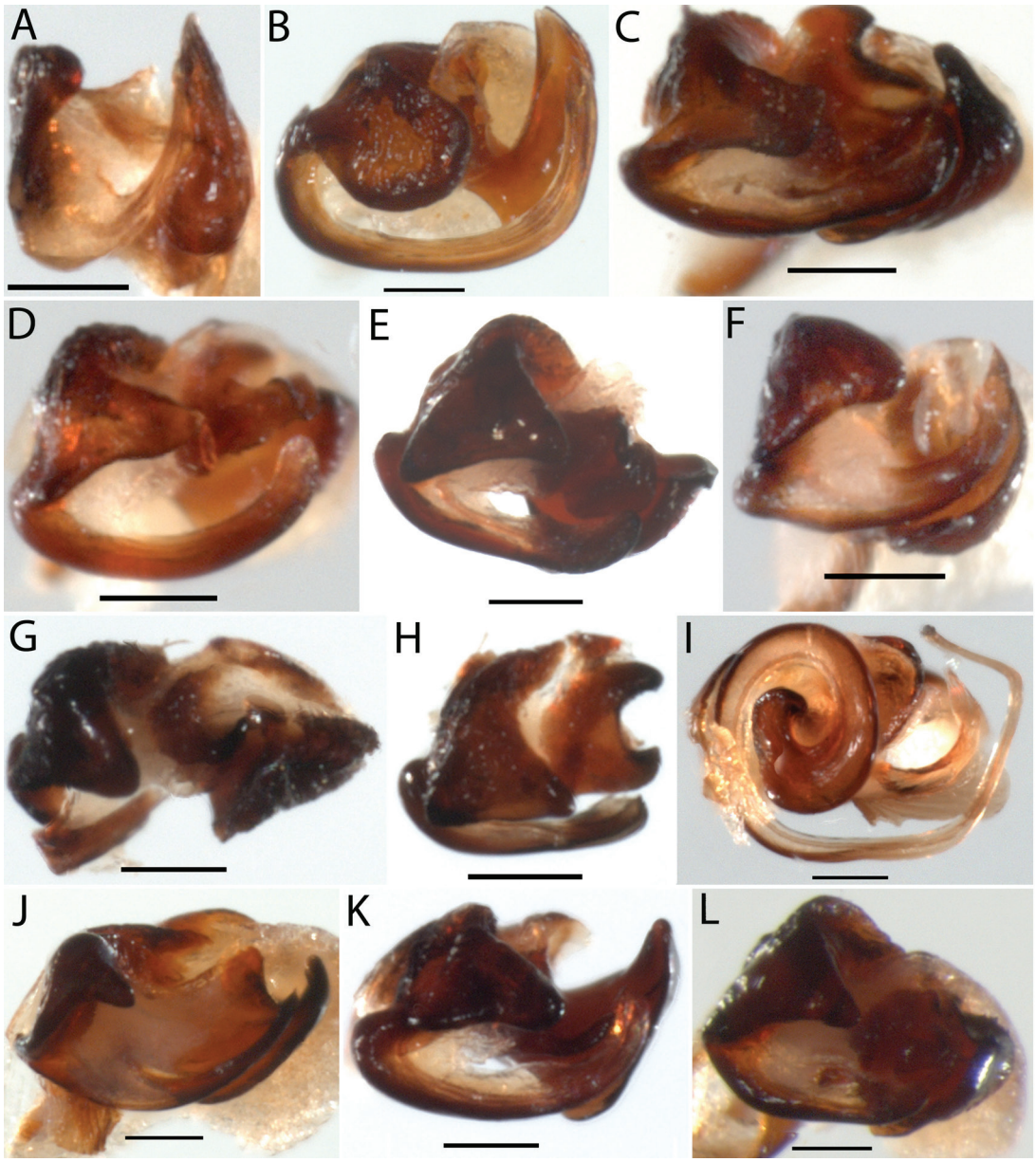

Figure 47. *Artoria* spp., palea of male pedipalp, ventral view: **A**, *A. barringtonensis* sp. n. (AM KS122794); **B**, *A. beaury* sp. n. (AM KS127757); **C**, *A. belfordensis* sp. n. (AM KS127759); **D**, *A. bondi* sp. n. (AM KS128073); **E**, *A. booderee* sp. n. (AM KS128069); **F**, *A. comleroi* sp. n. (AM KS128078); **G**, *A. corowa* sp. n. (AM KS128079); **H**, *A. equipalus* sp. n. (AM KS1228077) **I**, *A. extraordinaria* sp. n. (AM KS128074); **J**, *A. grahammilledgei* sp. n. (AM KS127756); **K**, *A. helensmithae* sp. n. (AM KS128076); **L**, *A. kanangra* sp. n. (AM KS45008). Scale bars: 0.1 mm.

Eyes. Diameter of AME: 0.09; ALE: 0.07; PME: 0.30; PLE: 0.22.

Anterior eye row. Straight, evenly spaced.

Chelicerae. Dark brown.

Labium. Dark brown, with lighter anterior rim (Fig. 45B)

Pedipalp coxae. Dark brown, with lighter anterior rim (Fig. 45B).

Legs. Femur of leg I very dark to almost black; other legs pale, femora and tibia with darker annulations; tarsi and metatarsi lighter (Fig. 45A).

Opisthosoma. Length 2.0, width 1.2; with pale anterior cardiac mark and dark grey irregular pattern (Fig. 45A). Venter pale with darker pattern around spinnerets (Fig. 45B); spinnerets dark grey.

Pedipalps. Tibia as long as broad; cymbium tip with 4–5 macrosetae (Fig. 45E, F); dorsal scopula patch present; tegular apophysis small, distally scooped, with tiny tooth, basally narrowed to 1/2, tip rounded not reaching margin of cymbium (Fig. 45E, F); palea as long as wide; basoembolic apophysis triangular with rounded tip; embolus semicircular; terminal apophysis tip triangular (Fig. 48I).

Female (based on paratype AM KS63496).

Total length 5.1.

Prosoma. Length 2.6, width 1.8; carapace and sternum colouration as male (Fig. 45C, D).

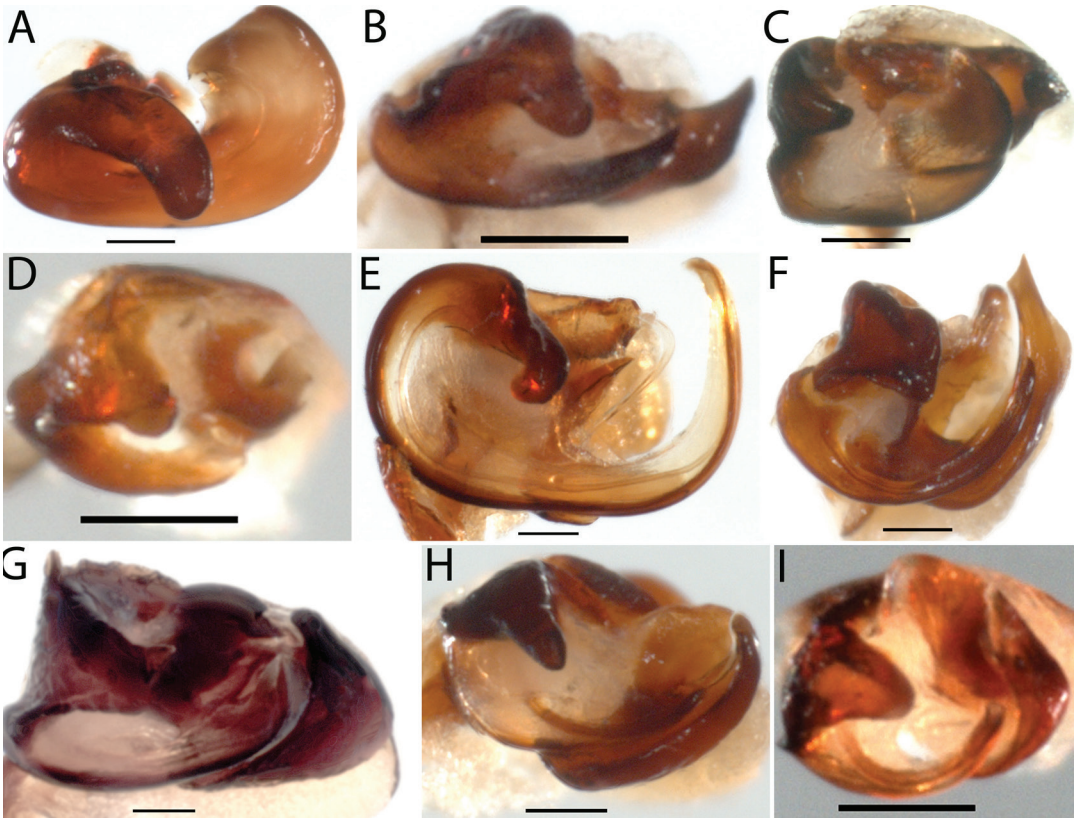

Figure 48. *Artoria* spp., palea of male pedipalp, ventral view: **A**, *A. kerewong* sp. n. (AM KS16162); **B**, *A. maroota* sp. n. (AM KS128075); **C**, *A. mungo* sp. n. (AM KS12773); **D**, *A. munmorah* sp. n. (AM KS128070); **E,** *A. slatyeri* sp. n. (AM KS116619); **F**, *A. strepera* sp. n. (AM KS48719); **G**, *A. taeniifera* Simon, 1909 (WAM 98/2179); **H**, *A. terania* sp. n. (AM KS10351) **I**, *A. wilkiei* sp. n. (AM KS128072). Scale bars: 0.1 mm.

Eyes. Diameter of AME 0.09, ALE 0.07, PME 0.32, PLE 0.25.

Anterior eye row. Strongly procurved, evenly spaced.

Opisthosoma. Length 2.8, width 1.6; opisthosoma similar colour as male but cardiac mark indistinct (Fig. 45C, D).

Epigyne. Wider than long, strongly sclerotised lateral posterior tips, atrium whitish (Fig. 45G); spermathecal heads massive, subglobular and almost touching medially, spermathecal stalks attached posteriorly and very short (Fig. 45H).

Life history and habitat preferences. *Artoria wilkiei* sp. n. appears to prefer open, coastal habitats such as sand dunes and heath. The species is autumn- to winter-mature with males collected from April to August. A single female was collected in June.

Distribution. *Artoria wilkiei* sp. n. has so far only been found in coastal NSW in the South Eastern Queensland (SEQ), NSW North Coast (NNC) and Sydney Basin (SYB) IBRA regions (Fig. 44).

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