

# SALTICIDAE (ARACHNIDA: ARANEAE) OF NEW ZEALAND. GENUS *ADOXOTOMA* SIMON, 1909

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**Abstract.**— The genus *Adoxotoma* Simon, 1909 is newly recorded from New Zealand. Its relationships are discussed, diagnostic drawings and a distributional map of *Adoxotoma forsteri* **sp. nov.** are given.



**Key words.**— Araneae, Salticidae, new species, New Zealand, taxonomy, zoogeography.

## INTRODUCTION

According to recent data (Żabka and Pollard 2002, 2003) the list of New Zealand Salticidae comprises 16 genera and 50 species. The actual fauna, however, is much richer with as many as 30 genera and 200 species expected (Żabka unpubl.). The main component of the fauna is made of 2 groups of genera, with “*Trite*” *auricoma* (Urquhart, 1886) and *Trite minax* (Powell, 1873) being the best known representatives of each group. Large Australian genera such as *Hypoblemum*, *Lycidas*, *Opisthoncus*, *Holoplatys*, *Helpis* and *Clynotis* are represented each by single species, probably introduced or dispersed by ballooning or rafting (Żabka et al. 2002). *Adoxotoma* treated here is also of Australian origin, though the species described is phylogenetically rather distant from its Australian congeners.

## MATERIAL AND METHODS

The material was provided by Brian Patrick, Erena Barker, Simon Wylie (Otago Museum, Dunedin = OMD), Mathew Anstey and Helen Ranson (Canterbury University, Christchurch), the latter deposited in Canterbury Museum, Christchurch (= CMC). The details of specimen examination were described earlier (Żabka 1991a). The drawings were made using grid system. Dissected epigyne was cleared in lactic acid, rinsed in distilled water and mounted in glycerine. Morphological and anatomical structures were investigated with Nikon microscopes. The following measurements were taken: AEW – anterior eyes width, AL – abdomen length, CL – cephalothorax length, CW – cephalothorax width, EFL – eye field length, L1, L2, L3, L4 – leg lengths, PEW – posterior eyes width.

## TAXONOMY

### *Adoxotoma* Simon, 1909

*Adoxotoma* Simon, 1909: 196; Roewer 1954: 154; Bonnet 1955: 160; Wanless 1988: 162; Davies and Żabka 1989: 220; Żabka 1991b: 18, 2001: 323; Platnick 1993: 733.

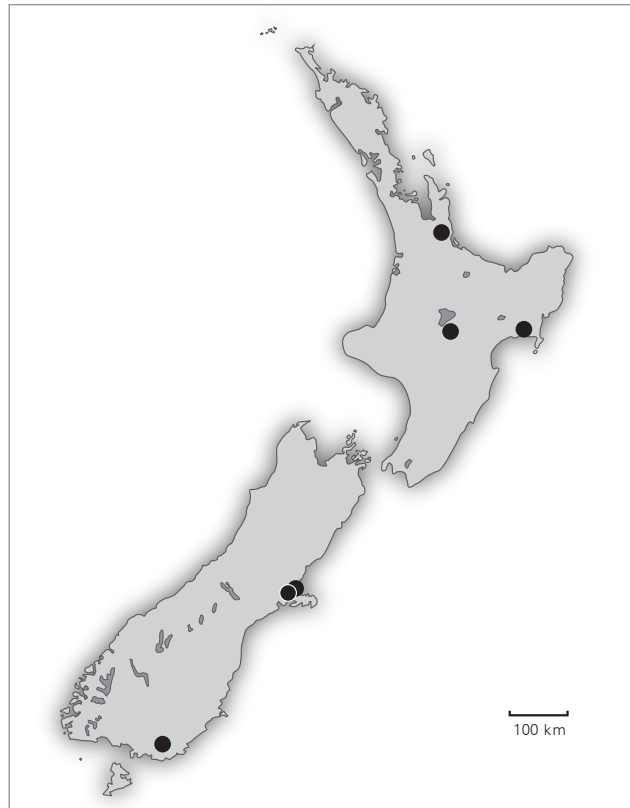


Figure 1. Distribution of *Adoxotoma forsteri* sp. nov. in New Zealand.

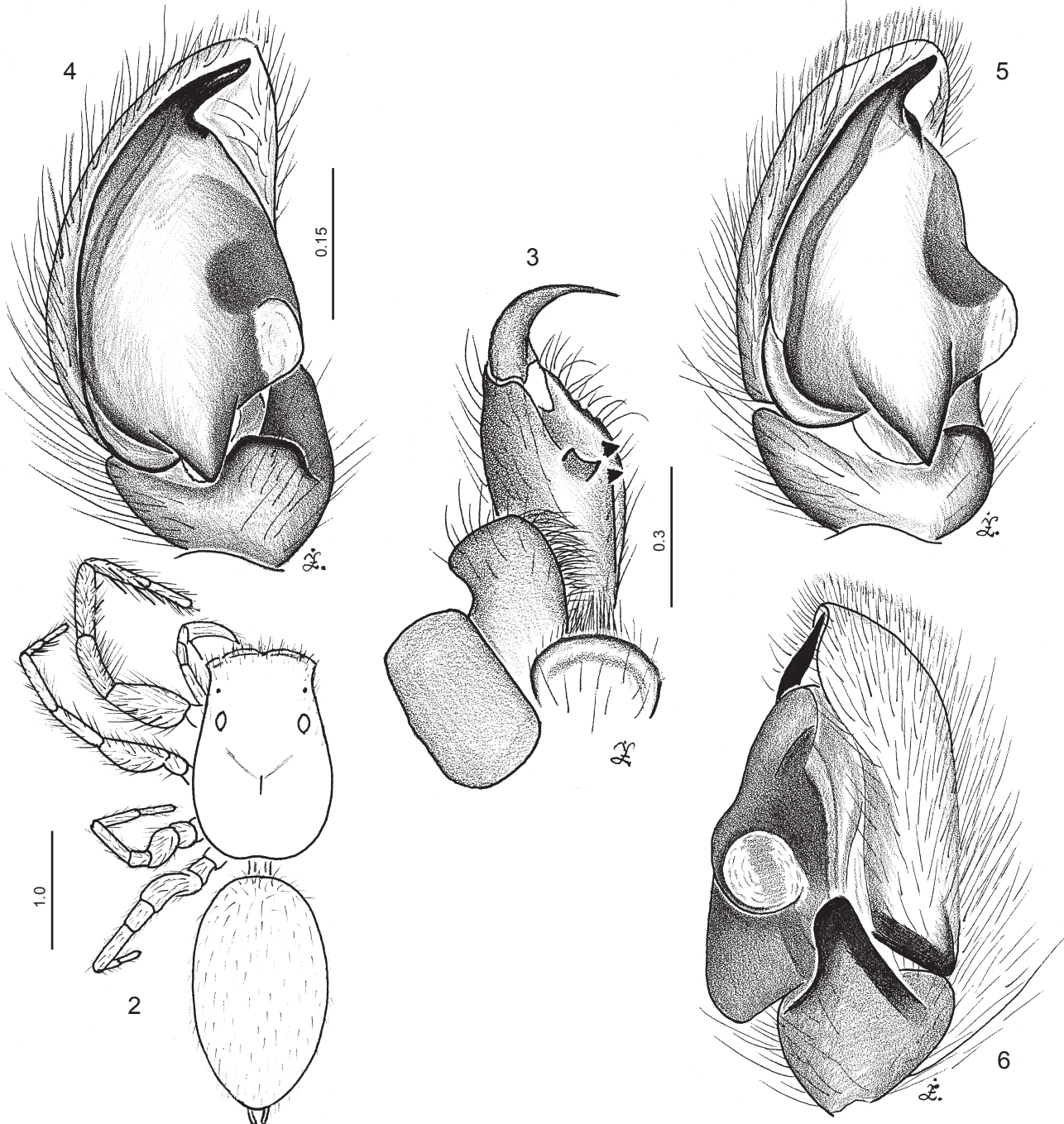
**Type species.** *Adoxotoma nigro olivacea* Simon, 1909, by subsequent designation of Bonnet (1955).

**Diagnosis.** Complete diagnosis and description of the genus has been given by Žabka (2001).

**Affinities.** While revising Astieae group of genera Wanless (1988) has given *Adoxotoma* the *incertae sedis* status. Recently the genus has been redefined (Žabka 2001) and its place in Astieae discussed and confirmed. Interestingly, being intermediate *fissi-pluridentati* in cheliceral dentition, *Adoxotoma* shows some genitalic and

other similarities to a number of *unidentati* genera such as *Phintella*, *Synagelides* or *Pseudosynagelides*. To clear the case further research considering molecular data is required.

**Distribution and biology.** Of eight Astieae genera and nearly 50 species known from Australia, New Guinea and adjacent islands only *Helpis minitabunda* has reached New Zealand – probably by ballooning or anthropodispersal. *Adoxotoma* has been known from Western Australia and New South Wales (Žabka 2001), mostly from bark or litter.



Figures 2–6. Male of *A. forsteri* sp. nov. (2) Habitus, (3) cheliceral dentition and maxilla, (4–6) palpal organ.

*A. forsteri* sp. nov. has been found in several localities of North and South islands (Fig. 1), in various biota, including human habitations, e.g., walls of city buildings.

*Adoxotoma forsteri* sp. nov.  
(Figs 2–9)

**Type material.** 1M holotype, 1M, 7F paratypes, Matamata, on brick wall, June 1982, D.J. Court, OMD; 5M, 1F, 1 juv. paratypes, Matamata, 20 Jan. 1984, D.J. Court, OMD; 1 juv. Colenso, 7 July 1966, RRF, OMD; 1M, 1F West Melton, *Eucalyptus* bark, H. Ranson, 27 Oct. 1999, CMC; 1M bush near Kelso, 23 Feb. 1969, C.L. Wilton, OMD; 1M Taradale, 30 Dec. 1968, Durt. (?) OMD; 1M Waitetoko RWA, 8 Jan. 1969, OMD; 1M Canterbury University, on ground, 22 Feb. 2000, M.P. Anstey, CMC.

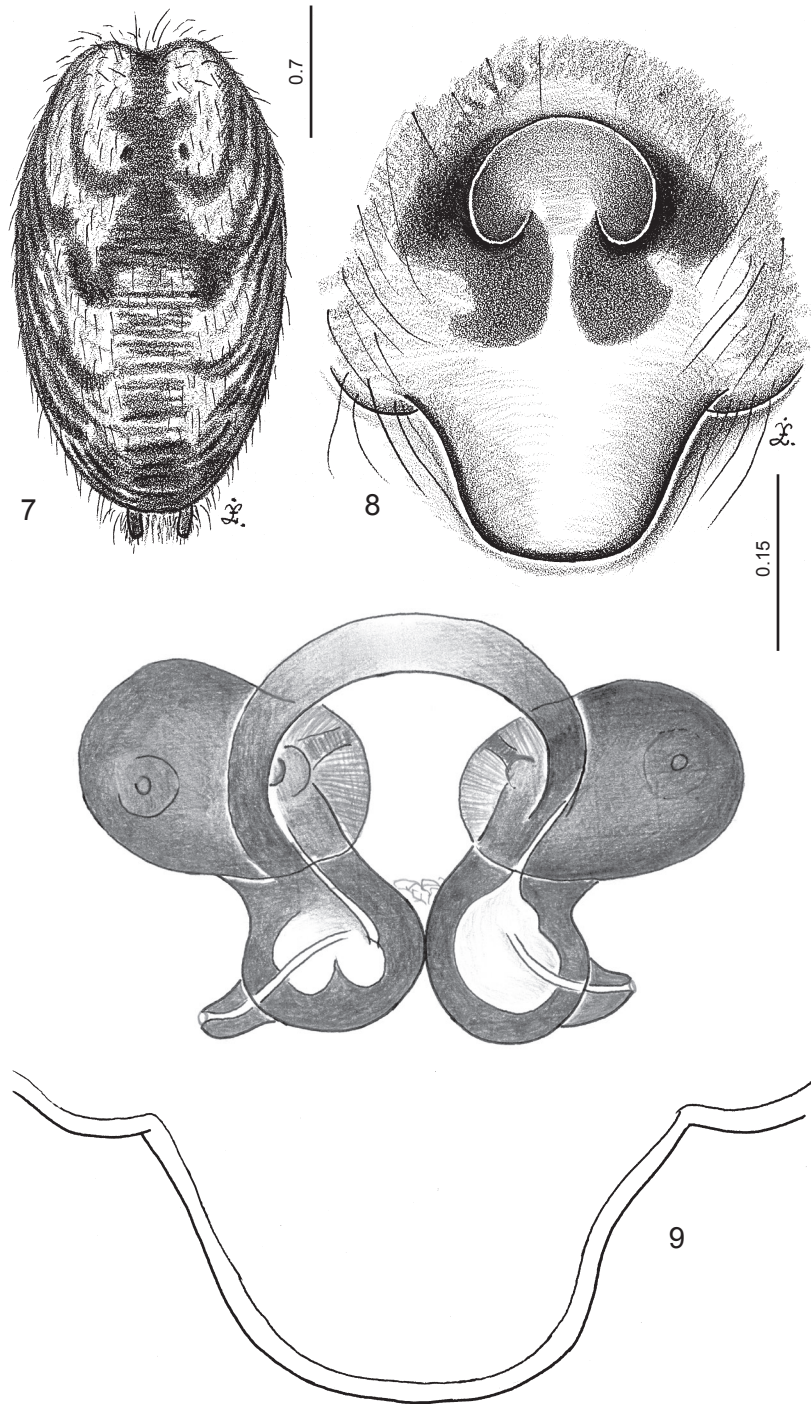
**Etymology.** For late Dr Ray Forster (Otago Museum, Dunedin) – a prominent arachnologist, who contributed enormously to the knowledge of New Zealand arachnids.

**Diagnosis.** *A. forsteri* sp. nov. is distinctive by genitalia in both sexes, slightly ant-like habitus and locomotion mode, enlarged first coxae and trochanters and first tibiae and metatarsi heavily armed with long spines.

**Description.** Male (holotype) (Fig. 2). Cephalothorax flat, eye field black, thorax brown, fovea in the middle of the thoracic part. Anterior part of eye field with brown bristles, whole surface with scattered white hairs. Abdomen nearly black, with lighter pattern, covered with long brown and shorter white hairs. Spinnerets brown-black. Clypeus very narrow, brown, with long, delicate, brown and light hairs. Chelicerae (Fig. 3) vertical, with 2 promarginal teeth and 1 retromarginal *fissidentati* tooth. Pedipalps proximally dirty-brown, distally lighter, cymbium dirty-yellow-orange. Maxillae and labium (Fig. 3) dirty honey, elongate, the former with anterolateral protuberance. Sternum dirty-honey, hearth-shaped. Venter grey. Legs (Fig. 2) I rather long, more massive than the others. Median parts of podomeres dirty-orange-brown, distal ones darker. Tibiae with 2 proventral and 3 retroventral spines, metatarsi with 2 pairs of longer spines. Other legs lighter and shorter, median parts of podomeres yellow-

ish, distal ones dark grey. Spination of the second legs the same as in the first. Palpal organ as shown in Figs 4–6. CL 1.92, EFL 0.67, CW 1.30, AEW 0.88, PEW 0.93, AL 2.08, L<sub>1</sub> 3.97, L<sub>2</sub> 2.91, L<sub>3</sub> 2.86, L<sub>4</sub> 3.74.

Female (paratype). Cephalothorax similar to the male only eye field with slightly lighter median stripe. Abdomen (Fig. 7) with distinctive light and dark grey pattern and a cluster of white terminal hairs. Spinnerets brown. Clypeus as in male, with long delicate light hairs.



Figures 7–9. Female of *A. forsteri* sp. nov. (7) Abdominal pattern, (8) epigyne, (9) internal genitalia.

Chelicerae brown, armed as in male. Proximal podomeres of pedipalps dirty orange, distal ones yellow with numerous white hairs. Maxillae dirty orange, round at the top. Labium brown. Sternum dirty brown, venter dirty beige. Legs I as in male, tibia with 3 pairs (3+3) of spines, metatarsus with 2 pairs (2+2). Tibia II with 2+3 spines, metatarsus II with 2+2. Epigyne (Figs 8–9) strongly sclerotised, with posterior lobe and semicircular anterior depression. Internal genitalia with large anterior chamber adjacent to copulatory openings. Insemination ducts short, thick-walled. Spermathecae round with distinctive accessory glands. CL 1.61, EFL 0.73, CW 1.24, AEW 1.04, PEW 0.98, AL, L<sub>1</sub> 3.12, L<sub>2</sub> 2.80, L<sub>3</sub> 2.86, L<sub>4</sub> 3.64.

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