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Research article

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Salticidae (Arachnida: Araneae) of New Caledonia: Genus *Corambis* Simon, 1901

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Abstract. The genus *Corambis* Simon, 1901 includes five species; three of them, *C. jacknicholsoni* sp. nov., *C. logunovi* sp. nov. and *C. pantherae* sp. nov., are described here as new. The female of the *C. foeldvarii* Szűts, 2002 is described for the first time and a new generic diagnosis is proposed. The distribution and relationships of *Corambis* are discussed in terms of the geological and bioclimatic history of New Caledonia.

Keywords. Jumping spiders, New Caledonia, endemism, taxonomy.

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Introduction

New Caledonia (NC) is known for its highly diverse and endemic fauna and is one of the global biodiversity hotspots (Grandcolas *et al.* 2008; Heads 2010; Wulff *et al.* 2013). This also applies to spiders. According to WSC (2019), about 300 species are recorded from the archipelago. Given the area of NC (18 576 km²), the number is quite substantial, although it certainly is underestimated, as only a few comprehensive investigations have been carried out there in modern times (Platnick & Forster 1989, 1993; Platnick 1993; Raven 1994).

Jumping spiders in NC are formally represented by 31 species (WSC 2019), but Patoleta (2002, 2017, pers. obs.) has recorded at least 51 species, some of them new, including those described here.

The genus *Corambis* was established by Simon (1901) for the female of *C. insignipes* (Simon, 1880), later studied by Żabka (1988). In 2002 Szűts described the missing male, added one new species, *C. foeldvarii*, and proposed a generic diagnosis. Both Simon and Szűts suggested relationships with other hairy, elongate and flat-bodied genera such as *Mendoza* Peckham & Peckham, 1894, *Marpissa* C.L. Koch, 1846, *Holoplatys* Simon, 1885, *Ocrisiona* Simon, 1901 and *Paraplatoides* Żabka, 1992. Recent molecular data (Maddison *et al.* 2008; Maddison 2015) did not support these views and revealed

close affinities with *Rhondes* Simon, 1901, *Lystrocteisa* Simon, 1884, *Penionomus* Simon, 1903 and *Rogmocrypta* Simon, 1900 – all of them belonging to a New Caledonian lineage within the Astoida clade.

Material and methods

This paper is based on specimens deposited in the collections listed below. The drawings were made using a grid system. The dissected epigynes were digested in 10% KOH, stained in Chlorazol Black E and studied under a transmission microscope. Dimensions (in mm) were measured with MultiScan software. Photographs were taken with a Nikon D5200 camera and a Nikon SMZ1000 stereo microscope, and digitally processed with ZoomBrowser and HeliconFocus software. Scales on figures are in mm.

The actual and predicted distributional maps were generated with DIVA-GIS bio-climatic software. Our model was based on 34 field records and met the requirements of the software (at least 5–10 records; Hernandez *et al.* 2006). The following environmental variables were used in the analysis: annual mean temperature, mean monthly temperature range, isothermality, temperature seasonality, maximum temperature of warmest month, minimum temperature of coldest month, annual temperature range, mean temperature of wettest quarter, mean temperature of driest quarter, mean temperature of warmest quarter, mean temperature of coldest quarter, annual precipitation, precipitation of wettest month, precipitation of driest month, precipitation seasonality, precipitation of wettest quarter, precipitation of driest quarter, precipitation of warmest quarter and precipitation of coldest quarter.

Abbreviations used

AEW	=	anterior eye row width
ag1–2	=	accessory glands
AL	=	abdomen length
ALE	=	anterior lateral eyes
AME	=	anterior medial eyes
AW	=	abdomen width
cd	=	copulatory ducts
CH	=	cephalothorax height
CL	=	cephalothorax length
co	=	copulatory openings
CW	=	cephalothorax width
df	=	dorsal furrow
e	=	embolus
EFL	=	eye field length
id	=	insemination ducts
L	=	leg
mI	=	metatarsus I
PEW	=	posterior eye row width
PLE	=	posterior lateral eyes
PME	=	posterior medial eyes
RTA	=	retrolateral tibial apophysis
s	=	spermatheca
t	=	tegulum
tl	=	tegular lobe

Collections examined

AMNH	=	American Museum of Natural History, New York, USA
HNHM	=	Hungarian Natural History Museum, Budapest, Hungary

MNHN = Muséum national d'histoire naturelle, Paris, France
QMB = Queensland Museum, Brisbane, Australia
USMB = Upper Silesian Museum Bytom, Bytom, Poland
WAM = Western Australian Museum, Perth, Australia

Results

Order Araneae Clerck, 1757
Family Salticidae Blackwall, 1841
Subfamily Salticinae Blackwall, 1841
Tribe Viciriini Simon, 1901 *sensu* Maddison 2015

Genus *Corambis* Simon, 1901

Corambis Simon, 1901: 605, 609, fig. 728.

Corambis – Berland 1924: 247. — Szűts 2002: 24–26, figs 1–4.

Type species

Hycitia insignipes Simon, 1880; by original designation.

Diagnosis

Spiders elongate, narrow and flat. Habitus similar to that of some other astioid genera (*Holoplatys*, *Ocrisiona*, *Zebraplatys* Žabka, 1992, *Paraplatoides*; Fig. 1), but first legs relatively heavier, chelicerae longer, palpal organ tegulum with a lobe, retrolateral tibial apophysis much larger and accessory glands (ag2) in female genitalia extremely long (Fig. 2). According to Maddison (2015) the genus is part of Tribe Viciriini within the Astioida clade (Maddison *et al.* 2008). Its closest relatives include other New Caledonian genera such as *Rhondes*, *Penionomus* and *Trite* Simon, 1885 (Fig. 1), and together they confirm local New Caledonian radiation.

Description

Spiders 3.5–13 mm long, thin, sexual dimorphism not distinctive (Figs 2–8). Cephalothorax almost twice as long as wide, uniformly flat, with no thoracic slope. Coloration in males rather uniformly dark, in females lighter with black eye surroundings. AME lenses twice diameter of ALE. PME tiny, closer to ALE than PLE, PLE equal to or smaller than ALE. Fovea behind PLE, slightly visible. Clypeus very narrow. Chelicerae unidentate, rather massive, maxillae elongate, sternum narrow and long. Abdomen very narrow and much longer than cephalothorax, sides almost parallel. Abdominal pattern with chevrons (*C. insignipes*, *C. foeldvarii*, *C. jacknicholsoni* sp. nov., *C. logunovi* sp. nov.) or dark spots (*C. pantherae* sp. nov.). Spinnerets and venter not distinctive. Both sexes with very strong first legs, in males with ventral brush of hairs on patella and tibiae. Ventral spines on tibiae in two rows 2-2-2, metatarsi with pairs of strong spines (Fig. 2B). Other legs delicate. Leg formula I-IV-II-III. Male palpal organ tegulum with posterior lobe, seminal duct not meandering, embolus short, fixed at top of tegulum and varying from hooked (*C. insignipes*, *C. foeldvarii*, *C. jacknicholsoni* sp. nov.) to wide and short (*C. logunovi* sp. nov.) (unknown in *C. pantherae* sp. nov.). Retrolateral tibial apophysis large and spatulate. Female copulatory openings close to epigastric furrow, far apart, oriented laterally (*C. insignipes*, *C. jacknicholsoni* sp. nov., *C. logunovi* sp. nov., *C. pantherae* sp. nov.) or posteriorly (*C. foeldvarii*). Spermathecae two-chambered (*C. insignipes*, *C. logunovi* sp. nov., *C. pantherae* sp. nov.) or three-chambered (*C. foeldvarii*, *C. jacknicholsoni* sp. nov.), located in central part of epigyne, strongly sclerotized. Main spermathecal chambers elongate, with two pairs of accessory glands,

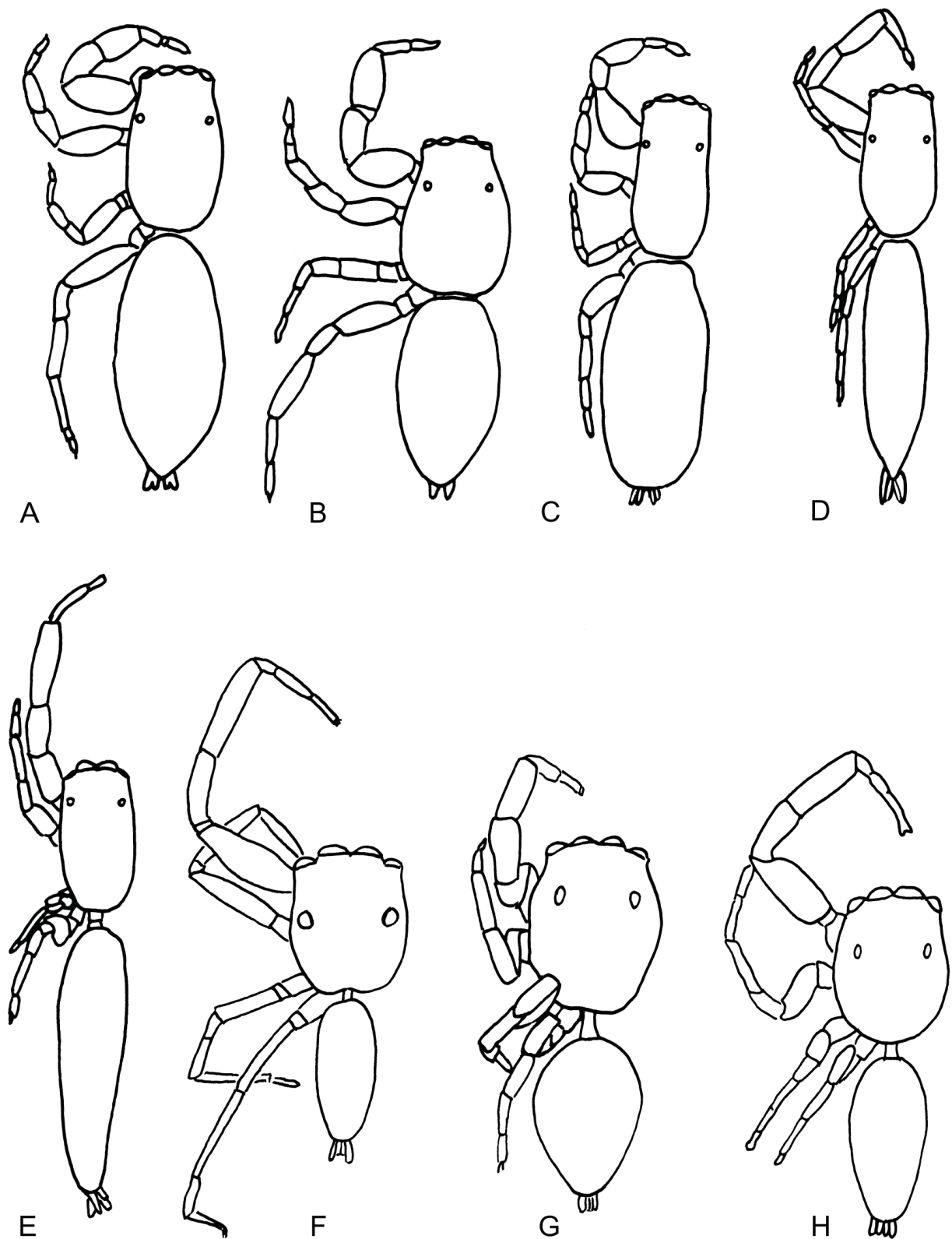


Fig. 1. Habitus of *Corambis* Simon, 1901 and related genera of Australasian Astioida. **A.** *Holoplatys* Simon, 1885. **B.** *Ocrisiona* Simon, 1901. **C.** *Zebraplatys* Žabka, 1992. **D.** *Paraplatoides* Žabka, 1992. **E.** *Corambis* Simon, 1901. **F.** *Rhondes* Simon, 1901. **G.** *Trite* Simon, 1885. **H.** *Penionomus* Simon, 1903.

ag2 extremely long. Position of ag2 varying from lateral (*C. insignipes*, *C. foeldvarii*, *C. jacknicholsoni* sp. nov.), through postero-lateral (*C. pantherae* sp. nov.) to posterior (*C. logunovi* sp. nov.).

Distribution

All species of *Corambis* are exclusively distributed in NC and the neighboring Loyalty Islands (Figs 9–10), and are found in different types of forests. The endemic character of the genus is supported by its DIVA-GIS predicted distribution (Fig. 11). This modeling shows that *Corambis* is limited to NC.

Corambis insignipes (Simon, 1880)

Figs 2, 9

Hycitia insignipes Simon, 1880: 165.

Corambis insignipes – Simon 1901: 609, fig. 728. — Berland 1924: 247, figs 200–203. — Žabka 1988: 443, figs 59–61. — Szűts 2002: 26, figs 1–4, 6–9, 11–18. — Prószyński 2017: 26, fig. 11h.

Material examined

NEW CALEDONIA • 1 ♀, 1 juv.; Valle e Tionaka; 1911; Roux and Sarasin leg.; Berland det.; MNHN • 1 ♂; Canala; 21.5203° S, 165.9531° E; MNHN 2647 • 1 ♂; Pic d'Amoa; 20°58' S, 165°17' E; 500 m a.s.l.; 27 Nov. 2003–30 Jan. 2004; G. Monteith leg.; Malaise trap; QMB 11483 • 1 ♂; Aoupinié; 21°11' S, 165°18' E; 750 m a.s.l.; by hand; 2 May 2005; G.B. Monteith leg.; QMB 12281.

Remarks

The type species of this genus has been treated, described and illustrated on several occasions (see above).

Corambis foeldvarii Szűts, 2002

Figs 3, 9

Corambis foeldvarii Szűts, 2002: 29–31, figs 5, 10, 19–21.

Diagnosis

Differs from other species of the genus by its slightly pointed palpal tibial apophysis, posteriorly oriented female copulatory openings and the lateral location of its accessory glands (Fig. 3).

Material examined

Paratype

NEW CALEDONIA • 1 ♀; Maré; 21.49309° S, 167.9967° E; HNHM 2014a.

Other material

NEW CALEDONIA • 1 ♂, 1 ♀, 1 juv.; Farino; 21.66399° S, 165.77493° E; 25 Aug. 1982; HNHM 2015 • 1 ♀, 2 juv.; Bourail; 21.565° S, 165.51025° E; 26–27 Jan. 1977; HNHM 2005 • 3 ♂♂, 2 ♀♀; Maré; 21.49309° S, 167.9967° E; öserdő [rainforest]; 7 Jun 1986; HNHM 2017 • 1 ♂♂, 6 ♀♀, 5 juv.; same collection data as for preceding; HNHM 2007 • 2 ♂♂; Rivière Bleue; 22.1051° S, 166.70° E; 21 Oct. 1992; Chazeau, Guilbert and Bonnet de Larbogne leg.; dense forest; fogging; MNHN • 1 ♀, 1 juv.; Pindai; 21.35° S, 164.96666° E; 5 Jan. 1993; Chazeau, Guilbert and Bonnet de Larbogne det.; sclerophyllic forest; fogging; MNHN • 1 ♀; Col d'Amieu; 21°35' S, 165°48' E; 440–470 m a.s.l.; 7 Jan. 2007; R. Dobosz leg.; beating; USMB • 1 ♂, 1 ♀; Mt Dzumac; 22°02' S, 166°28' E; 913 m a.s.l.;

29 Dec. 2006; R. Dobosz leg.; USMB • 1 ♂; Yahoué; 22.12° S, 166.30° E; 100 m a.s.l.; Nov 1986; N.L.H. Kraus leg.; AMNH • 1 ♂, 1 juv.; Houte Riviere Blue track to La Trauchae; 22°06' S, 166°38' E; 300 m a.s.l.; 21 Dec. 2006; R. Dobosz leg.; USMB • 1 ♀; Cap Ndoua; 22°23' S, 166°55' E; 50 m a.s.l.; 29 Nov. 2004; S.G. Write leg.; rainforest; sweeping; WAM 11809 • 1 ♀; Cap Ndoua; 22°23' S, 166°55' E; 50 m a.s.l.; 28–29 Nov. 2004; C. Burwell and S. Write leg.; rainforest; yellow pan; WAM 11808.

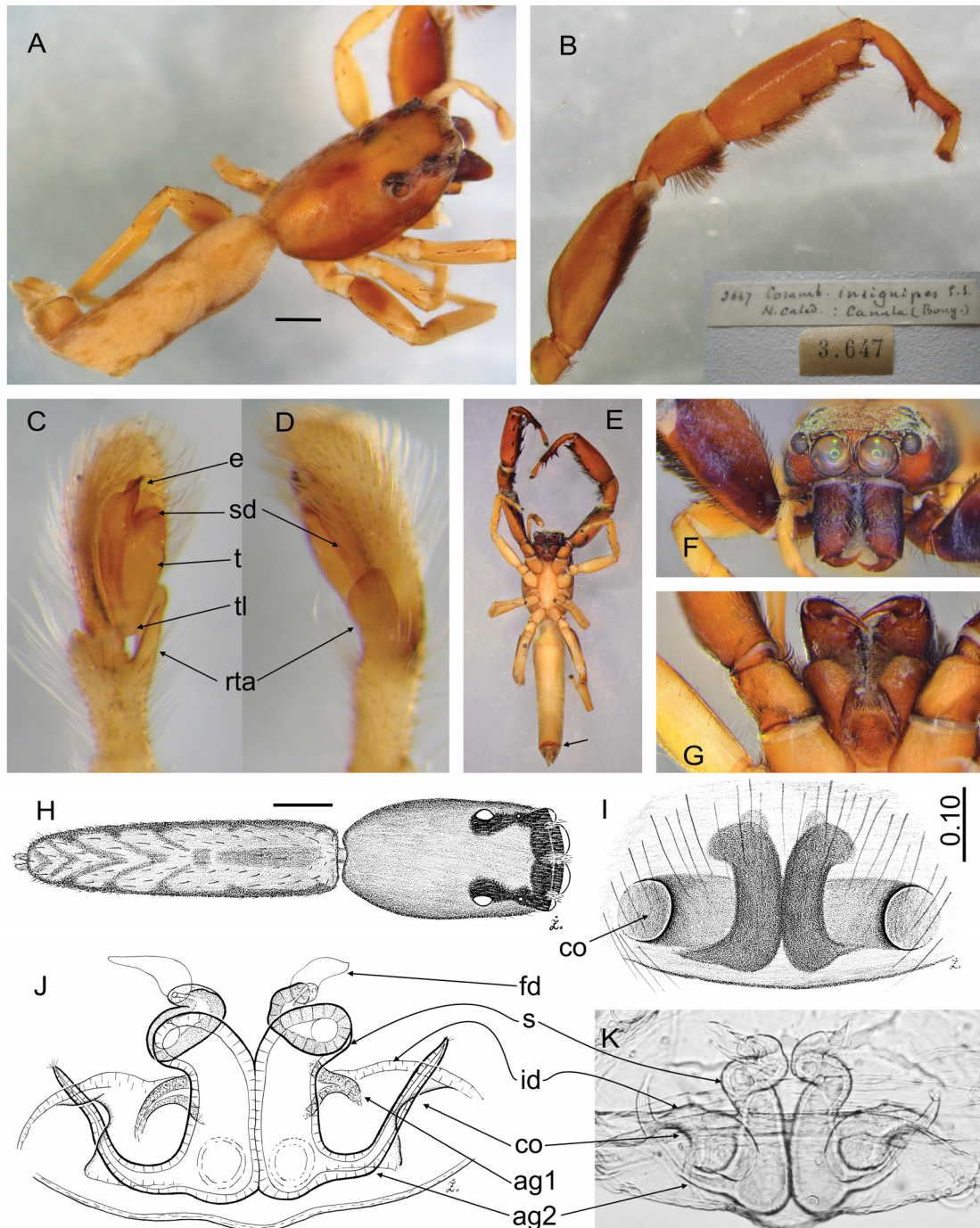


Fig. 2. *Corambis insignipes* (Simon, 1880). A–D. MNHN 2647. E–G. QMB 11483. H–K. Vallee Tionaka (MNHN). **A, E–F.** Dorsal, ventral and frontal views, ♂. **B.** First leg, ♂. **C–D.** Palpal organ, ♂. **G.** Chelicerae, maxillae and labium, ♂. **H.** Dorsal view, ♀. **I.** Epigyne, ♀. **J–K.** Internal genitalia, ♀. Scale bars: A, H = 1 mm.

Description

Female (first description)

Cephalothorax reddish-brown, sides brown, along central part with longitudinal darker line. Hairiness delicate, light grey. Abdomen beige with delicate chevrons, sides contrasting brown. Clypeus and chelicerae brown, maxillae and labium brownish, sternum contrastingly lighter, venter beige. First legs

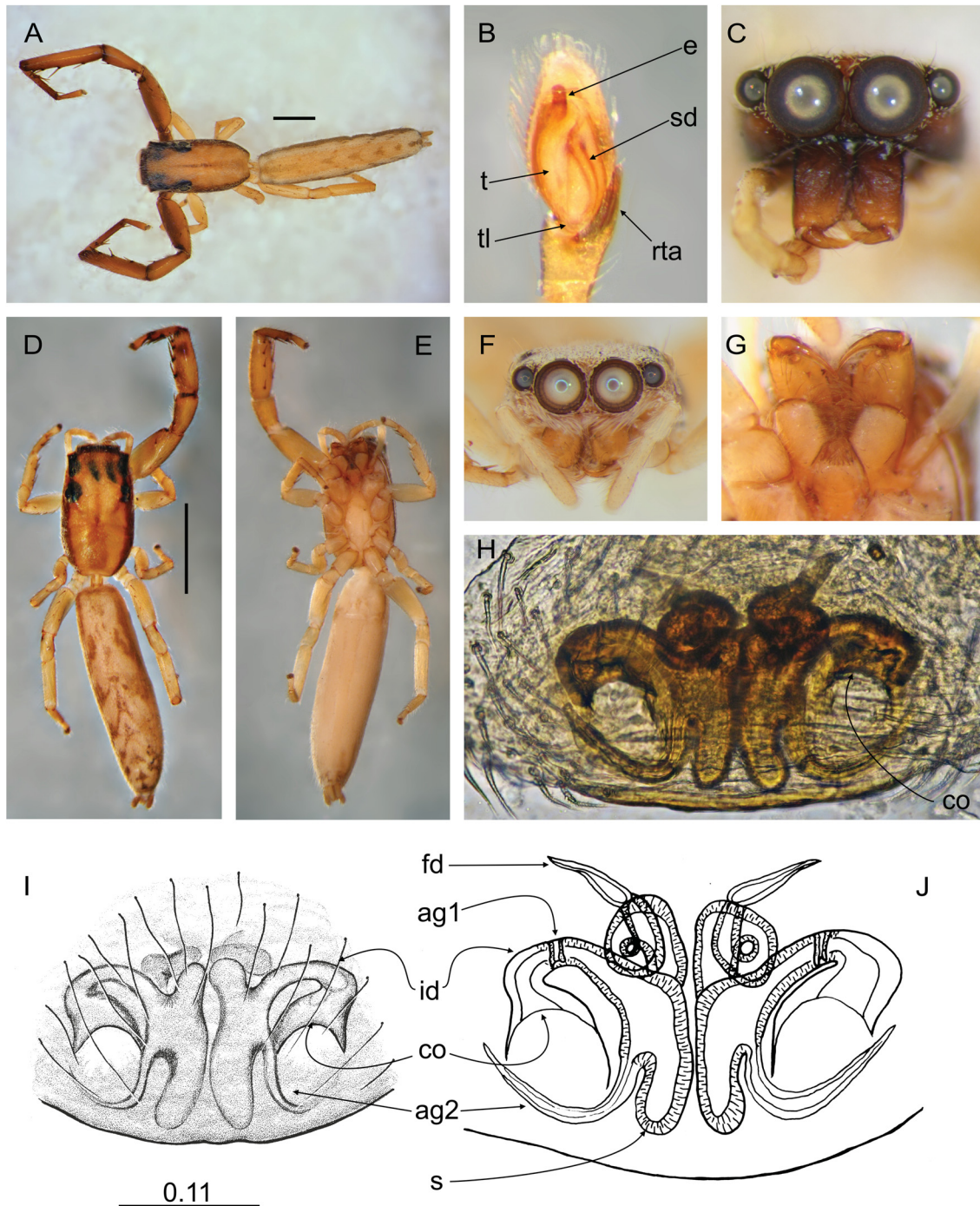


Fig. 3. *Corambis foeldvarii* Szűts, 2002. A–C. Mt Dzumac (USMB). D–J. Paratype (HNHM 2014a). A, C. Dorsal and frontal views, ♂. B. Palpal organ, ♂. D–F. Dorsal, ventral and frontal views, ♀. G. Chelicerae, maxillae and labium, ♀. H, J. Internal genitalia, ♀. I. Epigyne, ♀. Scale bars: A, D = 1 mm.

brownish, patellae with dorsal fringe. Other legs light grey, delicate, not distinctive. Epigyne poorly sclerotized, copulatory openings oriented posteriorly. In comparison to other species, insemination ducts wide and longest. Spermathecae two-chambered (Fig. 3H–J). Dimensions: CL 1.40, CW 0.80, CH 0.36, EFL 0.58, AEW 0.69, PEW 0.69, AL 2.37, AW 0.62.

***Corambis jacknicholsoni* sp. nov.**

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Figs 4–5, 10

Diagnosis

Differs from other species of the genus by its hook-like embolus (Fig. 4E–F) and the lateral location of ag2 in females (Fig. 5G).

Etymology

This beautiful spider is named for Mr. Jack Nicholson, the great American actor, three times Oscar winner.

Material examined

Holotype

NEW CALEDONIA • ♂; Plaine du champ de Bataille; 22°18' S, 166°44' E; 43 m a.s.l.; 17 Dec. 2006; R. Dobosz leg.; MNHN (previously USMB 9).

Paratypes

NEW CALEDONIA • 1 ♂, 1 ♀; same collection data as for holotype; MNHN.

Other material

NEW CALEDONIA • 1 ♀, 1 juv.; Noumea, Anse vata; 22.3004763° S, 166.44329° E; 1–4 Apr. 1985; A.D. Austin leg.; low vegetation; sweeping; WAM T47813 • 1 ♀; Yahoué; 22.12° S, 166.30° E; 100 m a.s.l.; Nov 1986; N.L.H. Kraus leg.; AMNH • 1 ♀; Île des Pins; 22.615° S, 167.48167° E; 1 Oct. 1977; Gadji e kereg; HNHN 2009 • 1 ♀, 2 juv.; Pindai; 21.35° S, 164.966667° E; 5 Jan. 1993; Chazeau, Guilbert and Bonnet de Larbogne leg.; sclerophyllic forest; fogging; MNHN • 2 ♂♂, 2 ♀♀, 1 juv.; same collection data as for preceding; 14 Apr. 1993; MNHN • 1 ♀, 1 juv.; same collection data as for preceding; 30 Jun 1992; MNHN • 1 ♂; Mandjelia; 20°24' S, 164° 32' E; 12 Jan. 2007; R. Dobosz leg.; USMB • 1 ♀; Gue de la Purina; 22.027681° S, 166.732878° E; 22 Dec. 2006; R. Dobosz leg.; beating; USMB • 1 ♀; Pic du Grand Kaori; 22°17' S, 166°59' E; 239 m a.s.l.; 26 Dec. 2006; R. Dobosz leg.; USMB • 3 ♂♂, 1 ♀, 2 juv.; Koumac, Nehué; 20.546602° S, 164.272576° E; 1 Aug. 1982; beating; HNHN • 1 ♀; Riviere Bleue; 22.1051° S, 166.70° E; 16 July 1992; Chazeau, Guilbert and Bonnet de Larbogne leg.; dense forest; P6 [Parcel 6?]; fogging; MNHN • 1 ♂; same collection data as for preceding; 21 Oct. 1992; MNHN • 1 ♀; same collection data as for preceding; 21 Dec. 1992; MNHN • 2 ♀♀; same collection data as for preceding; 20 Jan. 1993; MNHN • 1 ♀, 1 juv.; Wao Umi (Ichamba Forest); 21° S, 165°15' E; 390 m a.s.l.; 15 Jan. 2007; R. Dobosz leg.; USMB.

Description

Male

Cephalothorax centrally beige, sides brown. Abdomen very narrow and elongate, along central part beige with darker chevrons. Sides dirty brown with longitudinal indentation. Venter beige with two darker lines. Clypeus brownish. Chelicerae, maxillae and labium dirty orange. Sternum contrasting light. First legs dirty brown on sides, dorsally and ventrally lighter. Patellae with fringes of hairs. Other

legs yellowish, delicate. Pedipalps light yellowish. Tegulum ovoid with posterior lobe, embolus hook-like, tibial apophysis large, spatulate with dorsal furrow (Fig. 4E–G). Dimensions: CL 2.69, CW 1.56, CH 0.66, EFL 1.01, AEW 1.24, PEW 1.23, AL 4.15, AW 1.05.

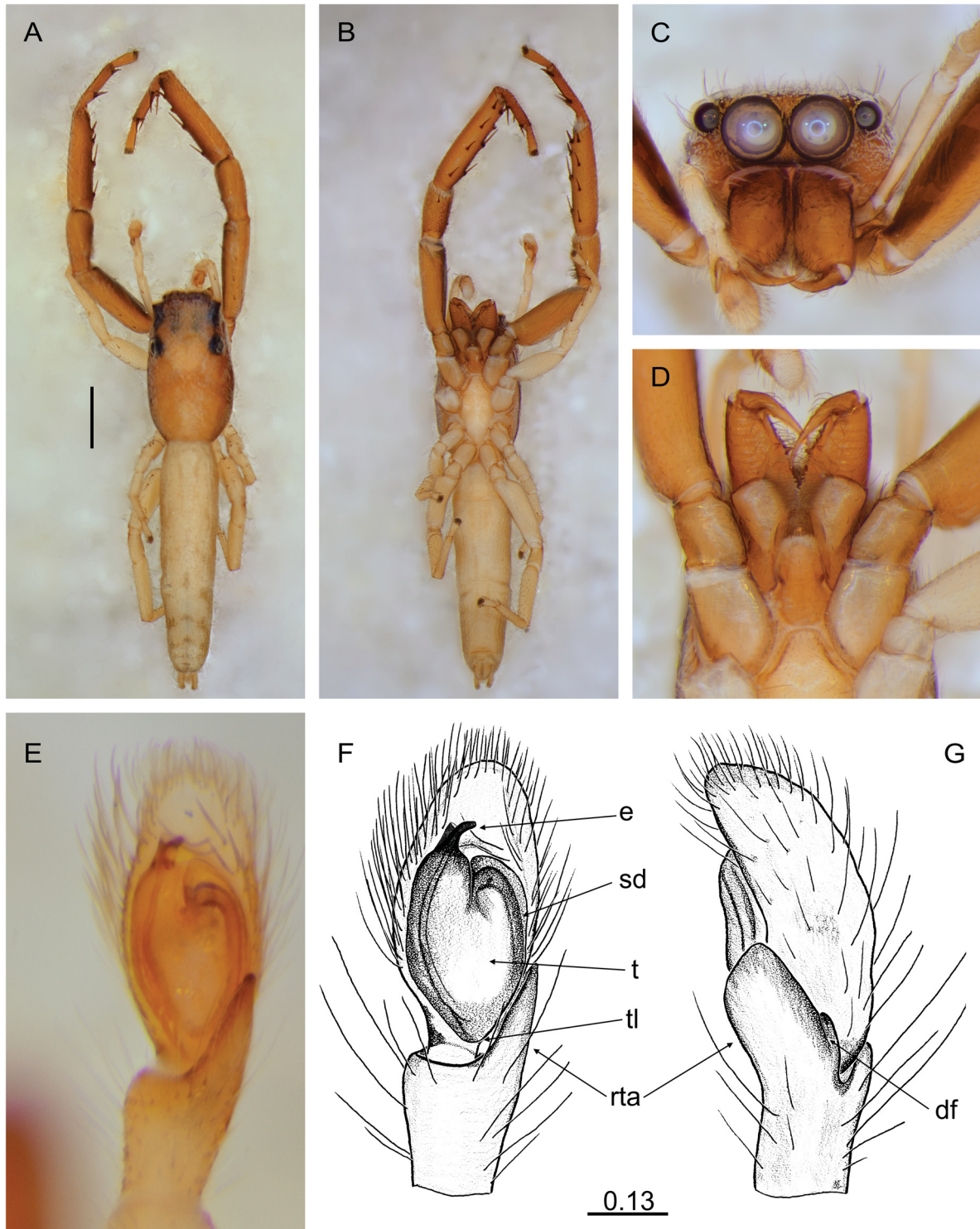


Fig. 4. *Corambis jacknicholsoni* sp. nov., holotype, ♂ (MNHN). A–C. Dorsal, ventral and frontal views. D. Chelicerae, maxillae and labium. E–G. Palpal organ. Scale bar: A = 1 mm.

Female

Cephalothorax along central part yellowish-grey, sides darker. Anterior and median eye surroundings brownish, PLE black. Abdomen beige, with delicate chevrons. Clypeus orange-grey, chelicerae light brown, pedipalps light grey, maxillae and labium grey. Sternum contrastingly light, venter beige. First legs dirty orange, patellae with no fringe. Other legs yellowish, delicate. Epigyne and internal genitalia as in Fig. 5F–H. Copulatory openings oriented laterally, insemination ducts shorter and joining spermathecae in their posterior parts (close to epigastric furrow). Spermathecae three-chambered. Dimensions: CL 2.22, CW 1.39, CH 0.61, EFL 0.92, AEW 1.08, PEW 1.07, AL 3.94, AW 1.10.

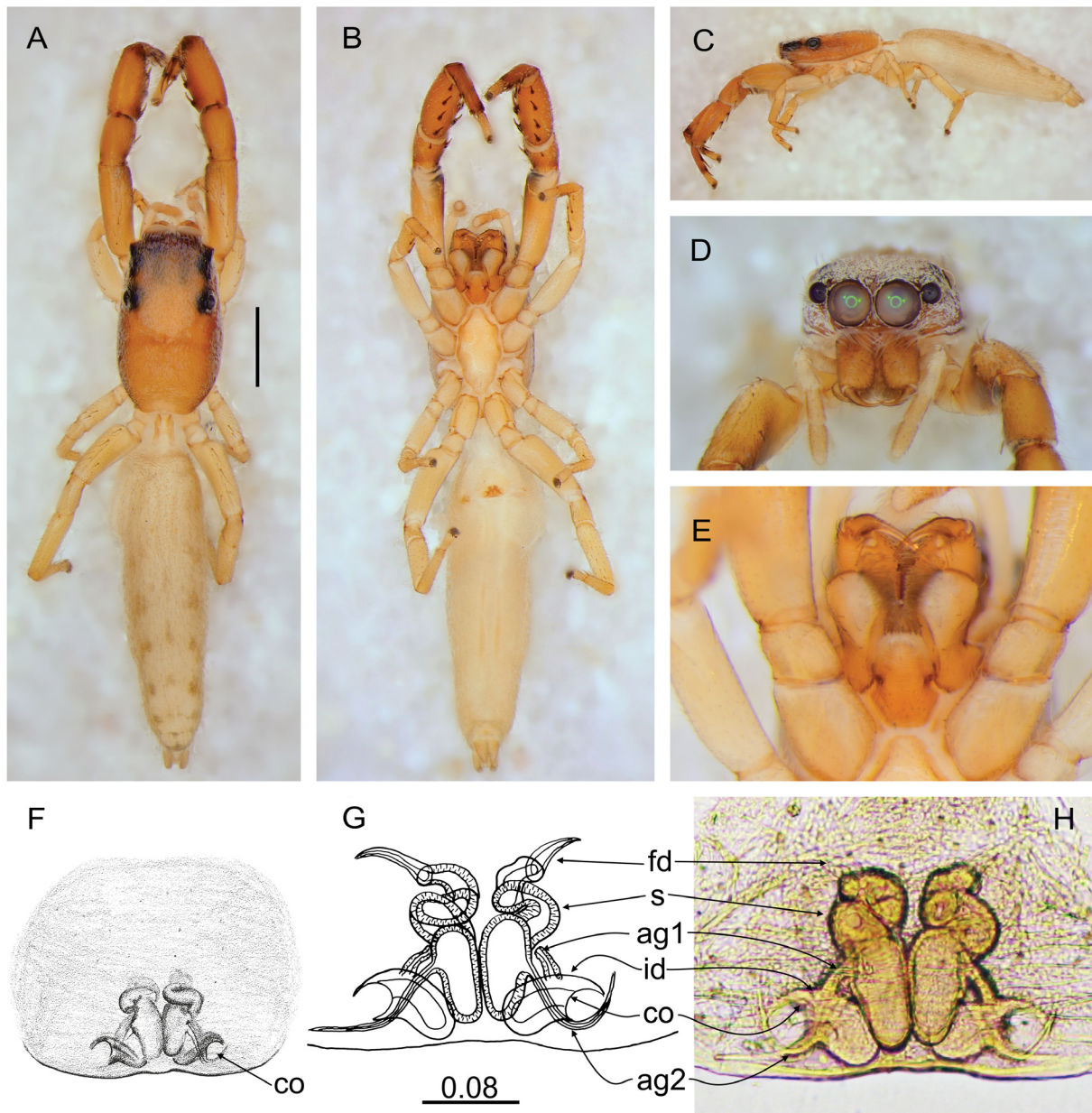


Fig. 5. *Corambis jacknicholsoni* sp. nov., paratype, ♀ (MNHN). A–D. Dorsal, ventral, lateral and frontal views. E. Chelicerae, maxillae and labium. F. Epigyne. G–H. Internal genitalia. Scale bar: A = 1 mm.

Corambis logunovi sp. nov.

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Figs 6–7, 9

Diagnosis

Differs from other species of the genus by its darker coloration, legs with no fringe, longer chelicerae, and much wider and heavier embolus (Fig. 6E–F). Copulatory openings oriented antero-laterally, accessory glands situated posteriorly on spermathecae (Fig. 7G).

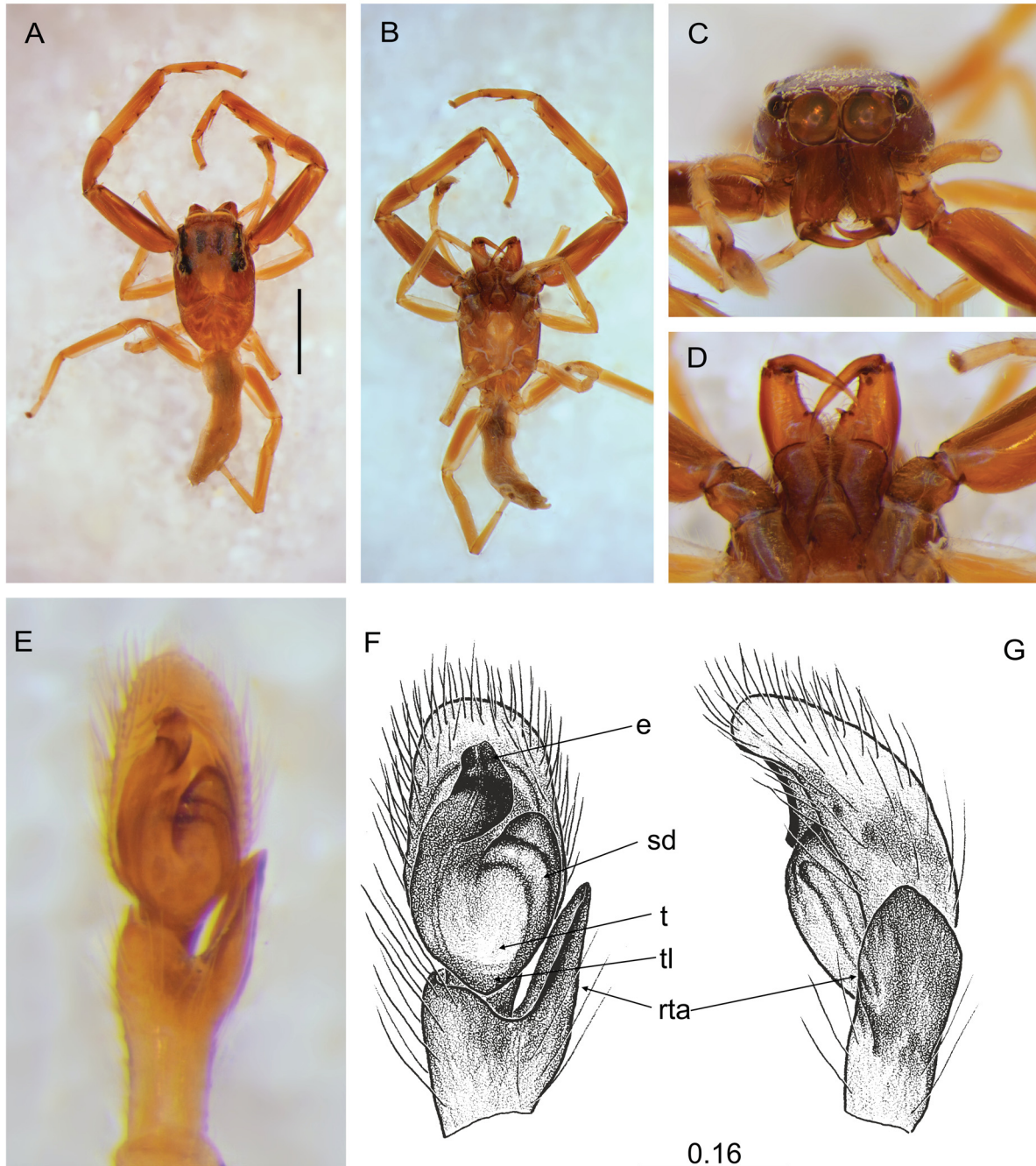


Fig. 6. *Corambis logunovi* sp. nov., holotype, ♂ (HNHM 2014). A–C. Dorsal, ventral and frontal views. D. Chelicerae, maxillae and labium. E–G. Palpal organ. Scale bar: A = 1 mm.

Etymology

This species is named for Dr. Dmitri Logunov, a distinctive Russian arachnologist (now at the University of Manchester), a friend of ours.

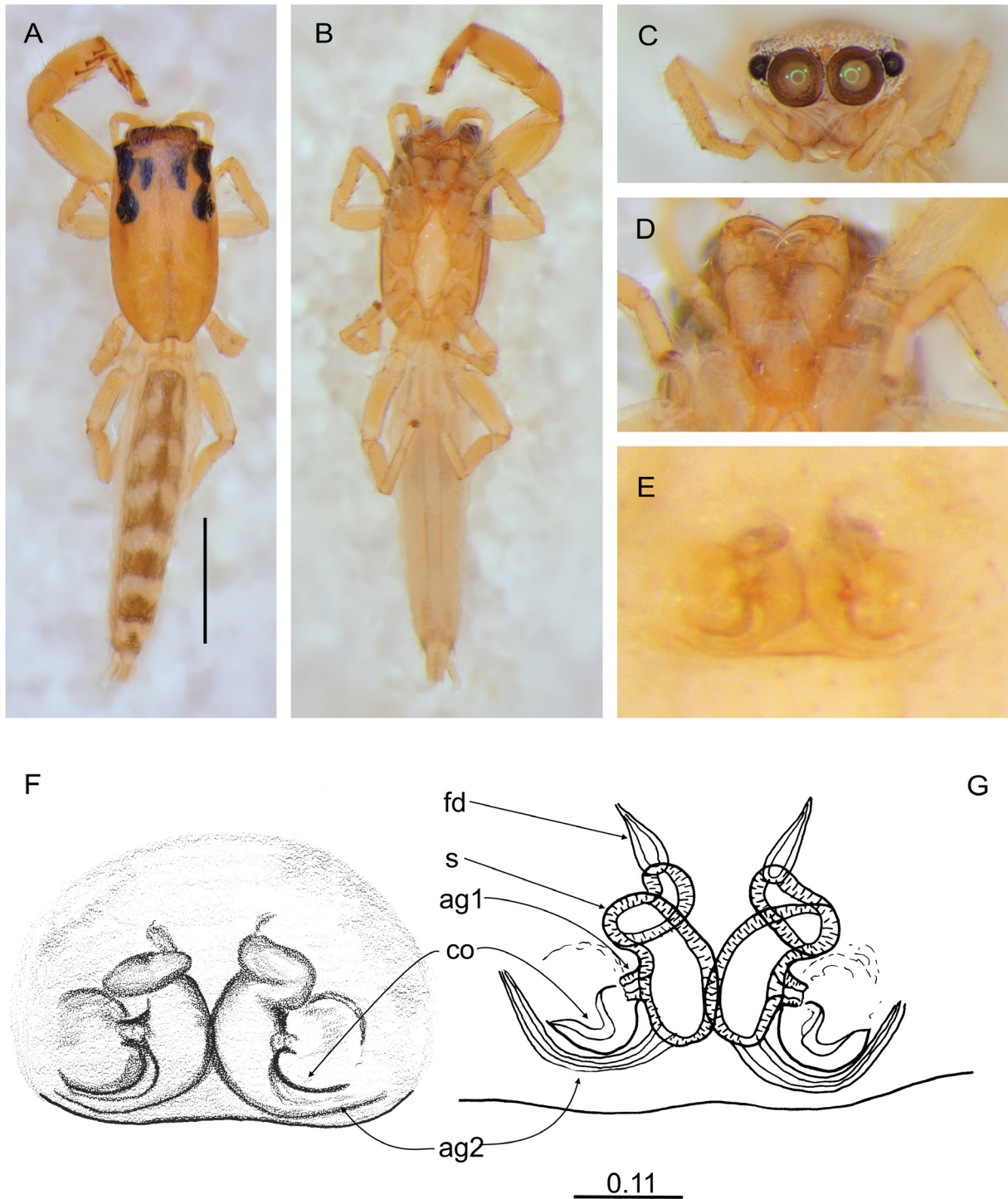


Fig. 7. *Corambis logunovi* sp. nov., paratype, ♀ (HNHM). A–C. Dorsal, ventral and frontal views. D. Chelicerae, maxillae and labium. E–F. Epigyne. G. Internal genitalia. Scale bar: A = 1 mm.

Material examined

Holotype

NEW CALEDONIA • ♂; Maré; 21.4930985° S, 167.9967° E; 7 Jun. 1986; *Araucaria*; HNHM 2014.

Paratype

NEW CALEDONIA • 1 ♀; same collection data as for holotype; HNHM.

Description

Male

Cephalothorax chestnut-brown, glossy, slightly darker on eye field, with delicate light grey hairs. Abdomen brown, darker along median part. Spinnerets brown, not distinctive. Clypeus brown, very narrow. Chelicerae, maxillae and labium brown. Sternum slightly lighter. Venter brown. First legs brown, distally increasingly lighter. Other legs delicate grayish-orange. Palpal organ as in Fig. 6E–F, tegular lobe indistinctive, embolus very wide, tibial apophysis spatulate. Dimensions: CL 1.52, CW 0.98, CH 0.62, EFL 0.59, AEW 0.79, PEW 0.74.

Female

Body very long and slender. Cephalothorax pale-orange, eye surroundings black with light grey hairs, lower margin darker. Eye field with two dark spots. Abdomen light grey with darker chevron pattern. Spinnerets light grey. Clypeus orange-grey with lighter hairs, very narrow. Chelicerae pale, orange-grey. Pedipalps yellowish. Maxillae and labium pale orange-grey, sternum light yellowish with darker narrow margin. Venter light grey with two longitudinal lines. All legs pale grayish-orange. First legs much more robust, but podomeres much shorter than in males. Other legs very delicate. Epigyne and internal genitalia as in Fig. 5E–G. Copulatory openings oriented antero-laterally, insemination ducts very short and joining spermathecae in their posterior parts. Spermathecae two-chambered. Dimensions: CL 1.58, CW 0.86, CH 0.38, EFL 0.63, AEW 0.78, PEW 0.71, AL 2.42, AW 0.55.

Corambis pantherae sp. nov.

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Figs 8, 10

Diagnosis

Differs from other species of the genus by its relatively wider cephalothorax and spotted abdominal pattern. Copulatory openings oriented laterally, ag2 situated postero-laterally (Fig. 8).

Etymology

This species is named for its abdominal pattern.

Material examined

Holotype

NEW CALEDONIA • ♀; Mt. Panié; 20.58833° S, 164.77083° E; 1300–1600 m a.s.l.; 15 May 1984; G. Monteith and D. Cook leg.; QMB S35653.

Description

Female

Cephalothorax dark brown, with numerous light grey hairs. Eye surroundings black. Between cephalic and thoracic part delicate depression, just behind eye field. Clypeus dark brown with light grey long hairs. Chelicerae, maxillae and labium brown. Sternum dirty orange brown with darker margin. First

legs dirty light brown, with very strong spines on tibiae and metatarsi. Other legs dirty-orange. Abdomen dirty-orange with distinctive dark spots. Spinnerets grey. Venter light grey, distally darker with two longitudinal lines. Internal genitalia similar to those of *C. insignipes*, copulatory openings oriented laterally, insemination ducts short, joinings posterior parts of spermathecae. Spermathecae relatively smaller than in *C. insignipes*, two-chambered (Fig. 8E–G). Dimensions: CL 4.50, CW 3.09, CH 1.29, EFL 1.67, AEW 2.40, PEW 2.33, AL 7.64, AW 2.21.

Male

Unknown.

Discussion

For a long time the salticids of New Caledonia have been discussed in terms of Gondwanan origin and heritage; however, the timing of NC separation (80 mya), its subsequent submergences and the predicted

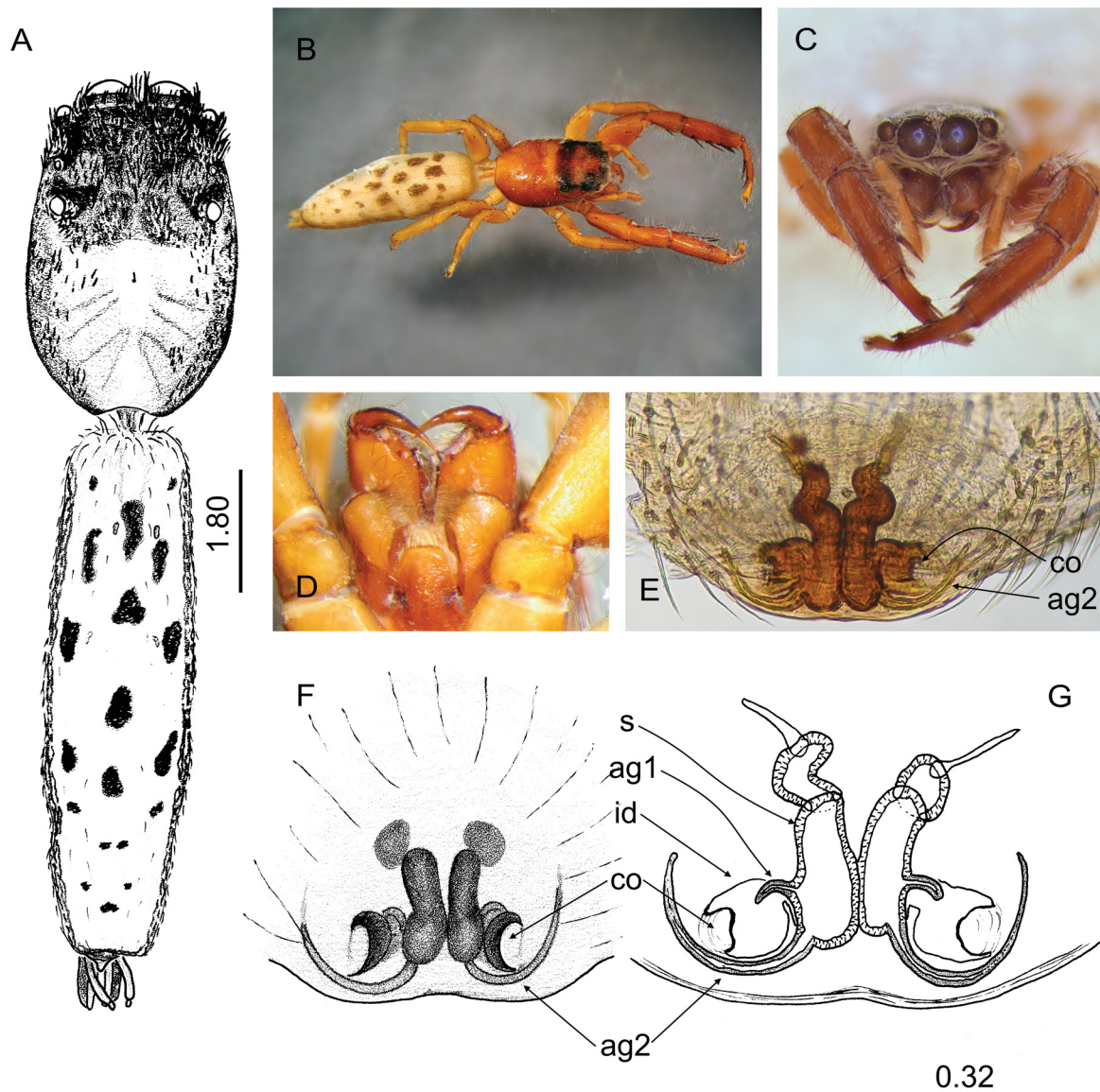


Fig. 8. *Corambis pantherae* sp. nov., holotype, ♀ (QMB S35653). A–C. Dorsal and frontal views. D. Chelicerae, maxillae and labium. E, G. Internal genitalia. F. Epigyne.

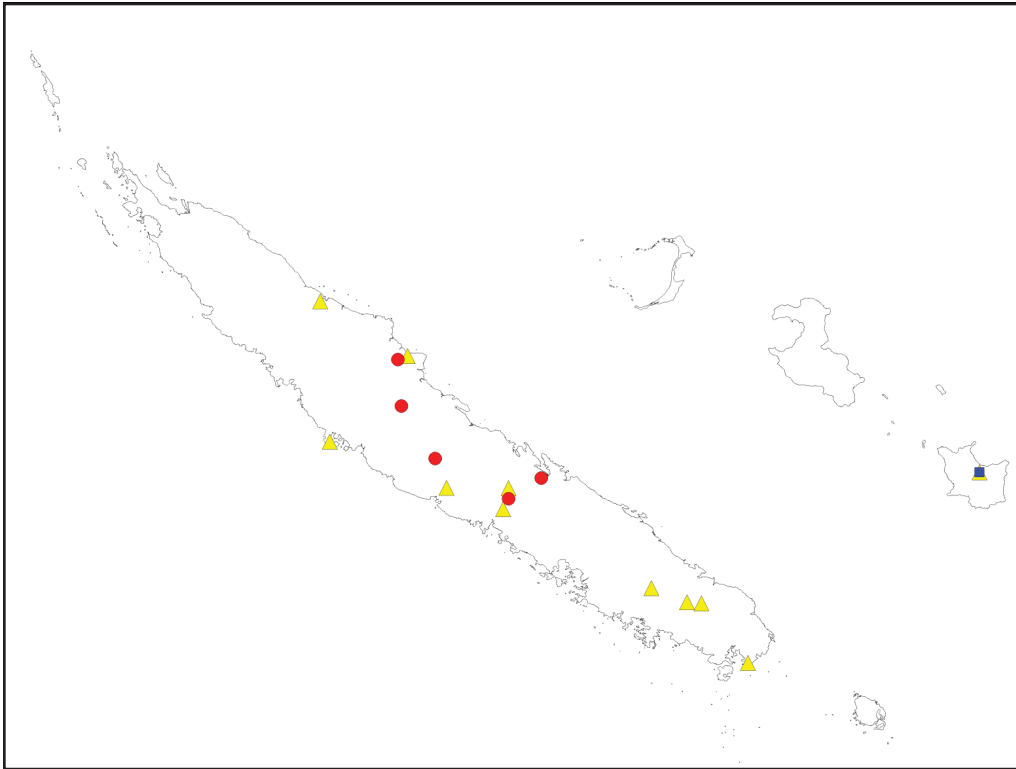


Fig. 9. Recorded localities of *C. insignipes* (Simon, 1880) (circle), *C. foeldvarii* Szűts, 2002 (triangle) and *C. logunovi* sp. nov. (square) in New Caledonia and the Loyalty Islands.

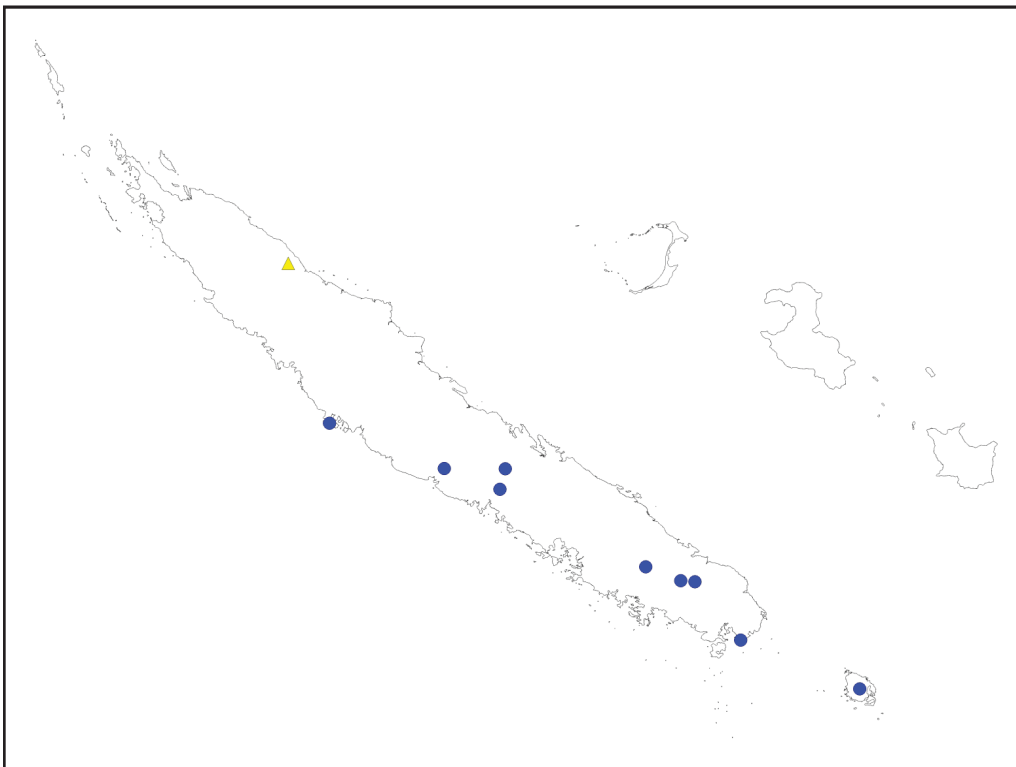


Fig. 10. Recorded localities of *C. jacknicholsoni* sp. nov. (circle) and *C. pantherae* sp. nov. (triangle) in New Caledonia and the Loyalty Islands.

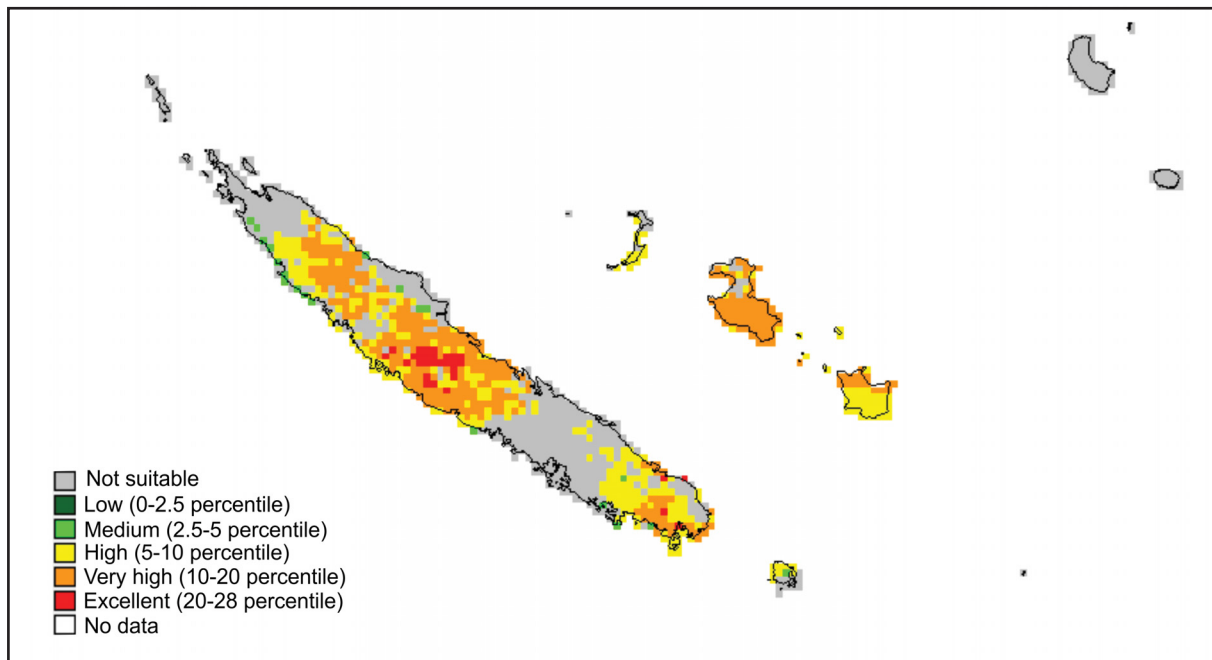


Fig. 11. Predicted distribution of *Corambis* Simon, 1901.

age of Salticidae (50 my) make the Gondwanan hypothesis very unlikely. Recent geological studies have revealed that NC was part of the Zealandia land mass, together with New Zealand, Norfolk Island and Lord Howe Island. NC only emerged in the Oligocene, some 37 mya (e.g., Cluzel *et al.* 2012; Campbell *et al.* 2012). Under such a scenario the fauna of NC must be much younger than thought before, and its diversity and endemism seem to be the result of 1) later (post-Gondwanan) colonization and dispersal from Australia, and migration between NC, Lord Howe Island and New Zealand, and 2) subsequent radiation *in situ*. Such a view is strongly supported by the molecular data on the relationships of the Australasian salticid taxa (Maddison *et al.* 2008; Maddison 2015) and by the case of *Trite* described earlier (Patoleta & Žabka 2017).

Furthermore, the endemism of *Corambis* and its relatives (*Lystrocteisa*, *Penionomus*, *Rhondes*, and *Rogmocrypta*) seems to be the result of quite recent New Caledonian radiation. The timing of this phenomenon is as yet unknown, but judging from the case of *Trite* and estimates for *Penionomus* (Bodner & Maddison 2012; Patoleta & Žabka 2017) the radiation may have begun some 10 mya. The problem can be solved by using fresh material and molecular data (molecular clock).

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References

- Berland L. 1924. Araignées de la Nouvelle Calédonie et des Îles Loyalty. *In*: Sarasin F. & Roux J. (eds) *Nova Caledonia. Zoologie* 3: 159–255.
- Bodner M.R. & Maddison W.P. 2012. The biogeography and age of salticid spider radiations (Araneae: Salticidae). *Molecular Phylogenetics and Evolution* 65: 213–240.
<https://doi.org/10.1016/j.ympev.2012.06.005>

- Campbell H., Malahoff A., Browne G., Graham I. & Sutherland R. 2012. New Zealand geology. *Episodes* 35 (1): 57–71.
- Cluzel D., Maurizot P., Collot J. & Sevin B. 2012. An outline of the geology of New Caledonia; from Permian–Mesozoic Southeast Gondwanaland active margin to Cenozoic obduction and supergene evolution. *Episodes* 35 (1): 72–86.
- Grandcolas P., Murienne J., Robillard T., Desutter-Grandcolas L., Jourdan H., Guilbert E. & Deharveng L. 2008. New Caledonia: a very old Darwinian island? *Philosophical Transactions of the Royal Society of London B* 363 (1508): 3309–3317. <https://doi.org/10.1098/rstb.2008.0122>
- Haeds M. 2010. The endemic plant families and the palms of New Caledonia: a biogeographical analysis. *Journal of Biogeography* 37: 1239–1250. <https://doi.org/10.1111/j.1365-2699.2010.02292.x>
- Hernandez P.A., Graham C.H., Master L.L. & Albert D.L. 2006. The effect of sample size and species characteristics on performance of different species distribution modeling methods. *Ecography* 29: e773785. <https://doi.org/10.1111/j.0906-7590.2006.04700.x>
- Maddison W.P. 2015. A phylogenetic classification of jumping spiders (Araneae: Salticidae). *Journal of Arachnology* 43: 231–292. <https://doi.org/10.1636/arac-43-03-231-292>
- Maddison W.P., Bodner M.R. & Needham K.M. 2008. Salticid spider phylogeny revisited, with the discovery of a large Australasian clade (Araneae: Salticidae). *Zootaxa* 1893: 49–64. <https://doi.org/10.11646/zootaxa.1893.1.3>
- Patoleta B. 2002. *Salticidae of New Caledonia and Fidji*. PhD Thesis. Katedra Zoologii, AP, Siedlce, Poland.
- Patoleta B. 2017. *Salticidae (Arachnida: Araneae) Wysp południowo-zachodniego Pacyfiku – Pochodzenie i Ocena różnorodności Fauny [Salticidae (Arachnida: Araneae) of SW Pacific Islands – Origin and Diversity of Fauna]*. Wydawnictwo Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach, Siedlce, Poland.
- Patoleta B. & Żabka M. 2017. A new species of *Trite* Simon, 1885 (Araneae: Salticidae) from New Zealand, with remarks on *Trite* relationships and radiation. *PeerJ* 5: e3463. <https://doi.org/10.7717/peerj.3463>
- Platnick N.I. 1993. The araneomorph spider fauna of New Caledonia. *Biodiversity Letters* 1 (3/4): 102–106. <https://doi.org/10.2307/2999754>
- Platnick N.I. & Forster R.R. 1989. A revision of the temperate South American and Australasian spiders of the family Anapidae (Araneae, Araneoidea). *Bulletin of the American Museum of Natural History* 190: 1–139.
- Platnick N.I. & Forster R.R. 1993. A revision of the New Caledonian spider genus *Bradystichus* (Araneae, Lycosoidea). *American Museum Novitates* 3075: 1–14.
- Prószyński J. 2017. Pragmatic classification of the world’s Salticidae (Araneae). *Ecologica Montenegrina* 12: 1–133.
- Raven R.J. 1994. Mygalomorph spiders of the Barychelidae in Australia and the western Pacific. *Memoirs of the Queensland Museum* 35: 291–706.
- Simon E. 1880. Matériaux pour servir à une faune arachnologique de la Nouvelle Calédonie. *Annales de la Société entomologique de Belgique* 23 (C.R.): 164–175.
- Simon E. 1901. *Histoire naturelle des Araignées*. Paris 2: 381–668. <https://doi.org/10.5962/bhl.title.51973>

Szűts T. 2002. Remarks on the genus *Corambis* Simon, 1901 (Araneae: Salticidae). *Folia Entomologica Hungarica* 63: 23–31.

WSC. 2019. World Spider Catalog. Version 20.5. Natural History Museum Bern.
<https://doi.org/10.24436/2>

Wulff A.S., Hollingsworth P.M., Ahrends A., Jaffré T., Veillon J-M., L’Huillier J. & Fogliani B. 2013. Conservation priorities in a biodiversity hotspot: Analysis of narrow endemic plant species in New Caledonia. *PLoS One* 8 (9): e73371. <https://doi.org/10.1371/journal.pone.0073371>

Žabka M. 1988. Salticidae (Araneae) of Oriental, Australian and Pacific regions, III. *Annales Zoologici* 41: 421–479.

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