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OPILIONES FROM THE SOLOMON ISLANDS.

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(Figures 1-16.)

Very little is known of the Opiliones of the Solomon Islands. The only paper dealing with the opilionids of this area is that by Rainbow (*Rec. Aust. Mus.*, v, 10) in which he described one new species (*Liobunum aurum*) and recorded a further species, *Mesoceras spinigerum* Sor., from Russell Island. Through the kindness of Dr. A. B. Walkom, Director, Australian Museum, I have been able to examine Rainbow's material. The specimens determined by him as *Mesoceras spinigerum* Sor. prove to be an undescribed species of *Ibalonius* Karsch, which is described below as *I. rainbowi*, n. sp., while the species described as *Liobunum aurum* is placed in the genus *Gagrella* Stol. and is recorded below as *Gagrella aura* (Rainbow). In addition, a new genus and species of the Phalangodidae from Savo Island and a new species of *Gagrella* Stol. from Cape Esperance, Guadalcanal, are described.

Order OPILIONES.
Suborder PALPATORES.
Division EUPNOI Hans. and Sor.
Family PHALANGIIDAE Simon.
Subfamily GAGRELLINAE Thorell.

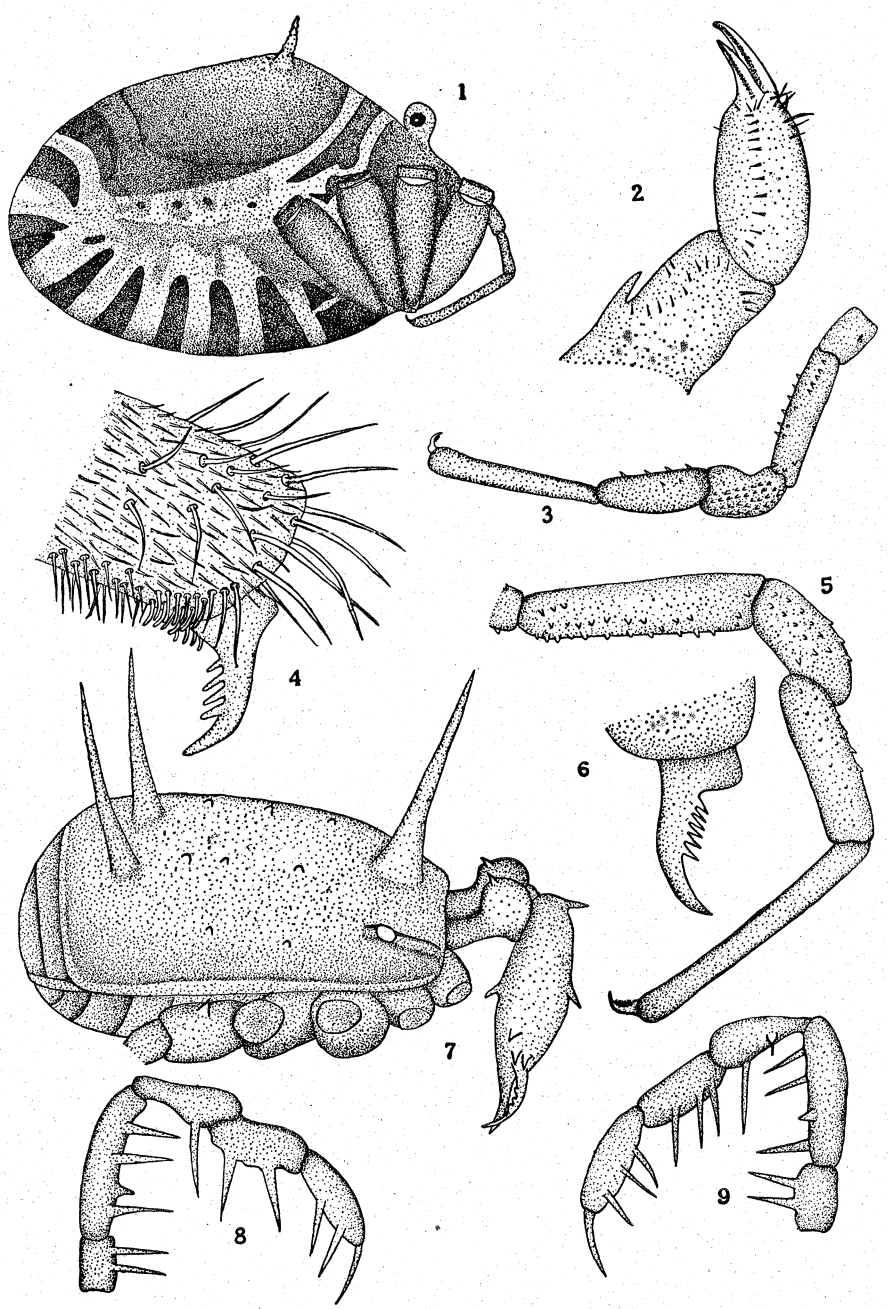
Gagrella neocera, sp. nov.
(Figs. 1–4.)

Colour.—Sclerotized areas of body, eye-mound and dorsal spine dark blackish-brown. Surface between sclerotic areas, pedipalps and chelicerae, yellowish-brown. Coxae blackish-brown.

Body.—Sclerotized areas finely granulate. Eye-mound rising from the middle of a strongly sclerotized cephalo-thoracic plate and directed slightly back, smooth, with a median longitudinal groove, along each side of which is a line of small pale setae. Second cephalo-thoracic plate narrow and extending below the scutum formed by the fusion of the first five tergal plates (fig. 1). Scutum without transverse grooves and with a strong, forwardly-directed spine at one-third. The three free tergites distinguished by transverse plates, but the anterior plate connected with the scutum in some specimens by a thickening of the intermediate integument.

Sternites represented by five transverse plates, a small triangular plate at each basal corner, and a further slender plate at each side of the genital operculum. Genital operculum as broad at the base as long, but narrowing distally. Lateral margins with row of small denticulations.

Pedipalpi.—Without apophysis. Femur below with a number of small peg-like denticulations, and a further proximal inner row of five; patella closely covered dorsally, and tibia with a proximal inner row of three and a ventral row of four similar denticulations. Tarsus smooth (fig. 3). All segments clothed with numerous short setae, rising directly from the surface of the integument and a smaller number of long setae rising from pits. Disto-ventral surface of tarsus with a number of comparatively stout pitted setae which, near the base of the claw, are modified into strong blunt rods with recurved tips. Tarsal claw with a ventral row of four strong teeth (fig. 4).

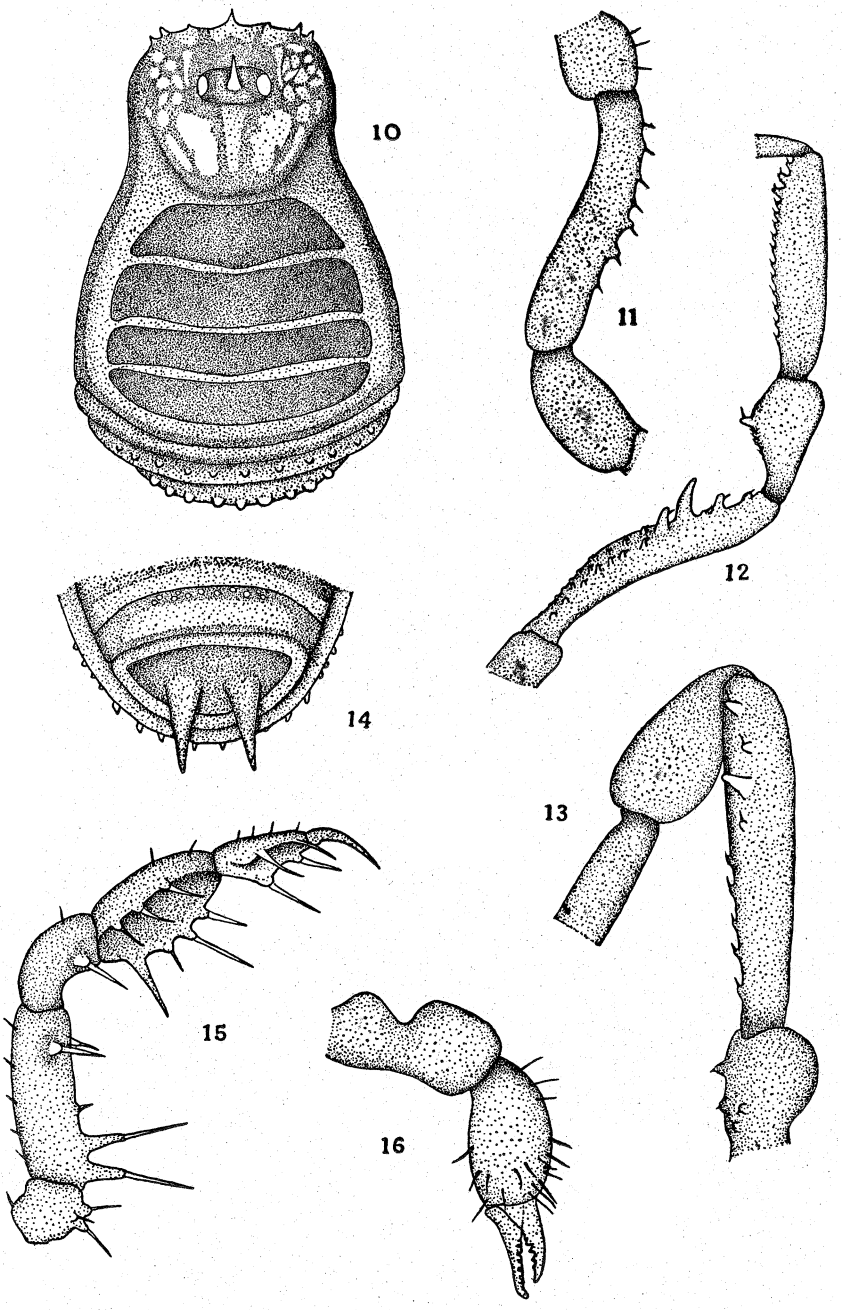


Figs. 1-4.—*Gagrella neocera*. sp. nov.—1, Lateral view of body. 2, Outer view of chelicera. 3, Inner view of left pedipalp. 4, Distal portion of tarsus of pedipalp showing rod-like setae and teeth on tarsal claw.

Figs. 5-6.—*Gagrella aura* (Rainbow).—5, Inner view of left pedipalp. 6, Tarsal claw of pedipalp showing teeth.

Figs. 7-9.—*Ibalonius rainbowi*, sp. nov.—7, Dorso-lateral view of body and chelicerae. 8, Outer view of pedipalp. 9, Inner view of pedipalp.

Note: In figures 3, 5, 6, 8 and 9 the setae are omitted.



Figs. 10-16.—*Savoa bonka*, sp. nov.—10, Dorsal view of body of female. 11, Trochanter, femur and patella of leg III of male. 12, Femur, patella and tibia of leg IV of male. 13, Trochanter, femur and patella of leg IV of female. 14, Postero-ventral view of male, showing pair of spines on anal plate. 15, Ventro-lateral view of pedipalp of female. 16, Outer view of chelicera of female.

Chelicerae.—Basal segment with well-developed forwardly projecting basal spine. In addition to a number of scattered setae, a single row of short setae extends along the outer side of both segments from the level of the basal spine to the base of the fingers (fig. 2). Fingers short and each with a granulate ridge on the inner margin.

Legs.—Very long and slender. Coxae, trochanters and femora of legs I–IV coarsely granulate, remaining segments smooth. Margins of coxae each with a row of coarse granules.

Measurements (all measurements in millimetres).

Body: Length 4, width 2·5.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total.
Leg I	1·2	0·5	10	2	9	10	18	50·7
Leg II	1·35	0·5	20	2	19	18·7	39	100·55
Leg III	1·1	0·4	10	2	9	11	18	51·5
Leg IV	1·25	0·4	13	2	10	14	16	56·65
Pedipalp	—	0·7	2·0	0·9	1·3	—	2·3	7·2

Chelicera ..... Basal 2·0, Second 2·5.

Type, Dominion Museum Collection, Tube 2/67.

Paratype, Australian Museum Collection.

Locality.—A large number of specimens were collected on low shrubs in coastal jungle, Cape Esperance, Guadalcanal. (Coll. R.R.F.)

Gagrella aura (Rainbow), 1913.

1913. *Liobunum aurum* Rainbow.

1857. *Gagrella amboinensis* Dol. (part).

(Figs. 5 and 6.)

This species was described by Rainbow (1913) under the name *Liobunum aurum*, n. sp. Roewer in "Die Weberknechte der Erde" (1923) placed the species in the genus *Gagrella* as a synonym of *G. amboinensis* Dol. While the species certainly belongs in *Gagrella*, it is undoubtedly a true species. It can be distinguished from *G. amboinensis* by the numerous denticulations on the ventral surface of the femur of the pedipalp in addition to those on the dorsal surface of the patella and tibia (fig. 5)—in *G. amboinensis* there being only two or three tiny teeth on the ventral surface of the femur. Furthermore, although the specimens are much faded, it would appear that the original colour was a yellow-brown, with the scutum a darker brown, whereas *G. amboinensis* is blackish-brown.

Type, Australian Museum, Sydney.

Locality.—Solomon Islands, precise locality not known.

Suborder LANIATORES.

Family PHALANGODIDAE.

Subfamily PHALANGODINAE.

Savoa, gen. nov.

Eye-mound wider than long, well removed from anterior margin of the cephalothorax, with a strong median spine, directed slightly forward. First five tergites fused into a carapace. Carapace smooth. Areas I–IV distinguished by four transverse plates. Free tergites 2 and 3 each with a single row of small tubercles. Sternites smooth. Spiracles exposed, clearly discernible. Genital operculum without tubercles or spines. Pedipalpi robust and strongly spined. Tarsal segments 3, 6, 5, 6, distitarsi of leg I, 2, and leg II, 3, jointed. Scopulae absent. Double claws of legs III and IV smooth and without pseudonychium. Secondary sexual characters very pronounced—femora III and

IV of male strongly curved and that of leg IV with stout spines. A pair of strong spines present on the anal plate of male.

Genotype, *S. bonka*, n. sp.

Savoa is related to both *Zalmoxis* Sorensen and *Acrozalmoxis* Roewer, but can be immediately separated from the former by the presence of a median spine on the eye-mound, and from the latter by the lack of spines on the dorsal scutum.

Savoa bonka, sp. nov.

(Figs. 10–16.)

Female.

Colour.—Cephalothorax yellow-brown with black-brown reticulate markings. Areas I–IV dark brown. Area V with median transverse black line. Remainder of carapace yellow-brown. Free tergites yellow-brown with indefinite black-brown reticulations. Anterior margin of sternites dark brown, remainder yellow-brown. Coxae light yellow, legs light brown.

Body.—As in generic description. Anterior margin of cephalothorax with seven small teeth, one median, two at each corner and a further small one at midway on each side (fig. 10). Free tergites 2 and 3 each with a single transverse row of low seta-tipped tubercles. Anal plate with a number of similar tubercles. Genital operculum smooth—sternum slender, tapering anteriorly.

Pedipalpi.—Trochanter below with three spinous tubercles, the median being smallest. Femur proximally below with two large spinous tubercles in line, followed by a small spined tubercle; at five-sixths are two further lateral spined tubercles. Patella distally, with a single large inner spinous tubercle. Tibia concave below and armed on the outer margin with a line of one large, one small and a further two large spines, and on the inner margin with a line of three uniform large spines. Tarsus concave below, armed with two outer and two inner strong spines.

Chelicerae.—Smooth, without spines or tubercles. Basal segment constricted at half-way, but swollen on the distal dorsal surface of the segment. Second segment when measured to the base of fingers, little more than one and a half times as long as wide. Fingers evenly toothed. Movable finger longer than fixed (fig. 16).

Legs.—All segments straight, not curved. Femur I with a ventral row of six small spinous tubercles. Remaining segments of leg I and legs II and III smooth, without spines or tubercles. Trochanter of leg IV below with a number of small tubercles on the proximal surface and a single large tubercle on the distal surface. Femur with a ventral row of five small tubercles, which extend to approximately half-way, and a further distal row on the prolateral surface of four tubercles, the second and fourth being relatively large (fig. 13). All tubercles on legs with a single sub-apical seta. Coxae I and II and ventro-lateral margins of coxa IV with numerous small setose papillae.

Measurements.

Body: Length 2·5, width 1·5.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total.
Leg I	0·3	0·25	0·6	0·3	0·5	0·7	0·55	3·2
Leg II	0·32	0·35	1·0	0·5	0·85	1·0	1·0	5·02
Leg III	0·34	0·25	0·8	0·3	0·7	0·9	0·65	3·94
Leg IV	0·56	0·5	1·2	0·6	1·0	1·25	0·75	5·86
Pedipalp	—	0·4	0·6	0·3	0·5	—	0·35	2·15
Chelicera: Basal 0·6, Second 0·65								1·25

Male.

Colour as in female.

Body larger and more deeply constricted between cephalothoracic and tergal region than female. Anal plate with a transverse pair of strong spines (fig. 14).

Legs.—Femora III and IV strongly curved. Femur of leg I with single ventral row of five small setose tubercles. Leg II smooth. Femur of leg III with ventral row of seven setose tubercles (fig. 11). Leg IV strong, proximal ventral surface of femur with numerous small setose papillae, distal ventral surface with a row of five blunt spines, the second, largest and non-setose. Patella below with a large median-placed blunt setose spine, preceded by a number of small setose papillae. Tibia with single ventral row of fourteen spinous tubercles. Metatarsus with a ventral row of very small spinous papillae. Calcaneus absent (fig. 12).

Chelicerae and pedipalpi as in female.

Measurements.

Body: Length 2·75, width 2·0.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total.
Leg I	0·35	0·25	0·75	0·45	0·5	0·9	0·6	3·8
Leg II	0·36	0·3	1·2	0·6	1·0	1·25	1·2	5·91
Leg III	0·40	0·3	0·85	0·45	0·75	1·05	0·65	4·45
Leg IV	0·6	0·6	1·9	0·85	1·55	1·5	0·75	7·75
Pedipalp	—	0·25	0·65	0·35	0·5	—	0·4	2·15
Chelicera: Basal 0·65, Second 0·75								1·40

Co-types (male and female), Dominion Museum Collection, Tube 2/69. *Paratypes*, Australian Museum Collection; Dominion Museum Collection, Tube 2/70.

Locality.—Large numbers of both males and females were collected under dead branches and coconut fronds in coastal forest, Savo Island.

Subfamily IBALONIINAE Roewer.

Ibalonius rainbowi, sp. nov.

(Figs. 7–9.)

Colour.—The specimens have been preserved in spirit for many years and are now of a uniform light yellow.

Body.—Symmetrically oval. Cephalothorax and tergites I–V fused into a scutum. Transverse grooves not visible, but position of tergites, I, II and III each distinguished by a single transverse row of granules. Tergite IV with a median pair of erect smooth spines, slightly higher than depth of body. Eye-mound absent, eyes lateral, each placed on small longitudinal ridge. Between the eyes rises a large median erect spine as high as depth of body (fig. 7). Free tergites smooth. Sternites each with a single transverse row of small granules.

Pedipalpi.—Slender, coxa unarmed; trochanter with two ventral spines; femur with ventral row of four spines, the second being small and blunt. Patella distally with one outer and one inner spine and a further small spinous tubercle on the proximal half of the inner surface. Tibia and tarsus each with two outer and three inner spines. Tarsal claw slender, almost as long as tarsus (figs. 8 and 9).

Chelicerae.—Basal segment constricted proximally, both segments spined as in fig. 7. Movable finger strongly curved, crossing fixed finger near tip.

Legs.—Coxa I armed with numerous spinous papillae. Coxae II, III and IV coarsely granulate. Coxa IV with a strong dorsal spine. All legs smooth, without spines or tubercles. Tarsal segments 4, 12, 5, 5. Distitarsus of leg I two-jointed, of leg II four-jointed. Tarsi III and IV with smooth double claws and a thick basal scopula.

Measurements.

Body: Length 2·9, width 2·4.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total.
Leg I	0·38	0·3	2·0	0·41	1·75	2·2	0·92	7·96
Leg II	0·38	0·41	9·24	0·96	9·2	18·4	2·4	40·99
Leg III	0·38	0·4	6·29	0·92	3·59	5·92	1·11	18·61
Leg IV	1·11	0·55	9·09	0·94	4·92	7·7	0·98	25·29
Pedipalp	0·37	0·38	0·8	0·78	0·75	—	0·78	3·86

Chelicera: Basal 0·74, Second 1·52 ..... 2·26

Cotypes.—Two specimens in the collection of the Australian Museum, Sydney, have been designated cotypes. Owing to the time the specimens have been preserved in spirit, it is not possible to determine the sex of the specimens accurately.

Locality.—Russell Island. Coll. W. Froggatt.

Selected Bibliography.

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