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Spiders from the Galápagos Islands. III. Miscellaneous families

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Summary

Four new species are described from the Galápagos Islands: *Neozimiris santiago* sp.n. (Gnaphosidae), *Speocera jacquemarti* sp.n. and *Theotima galapagosensis* sp.n. (Ochyroceratidae) and *Theridion coldeniae* sp.n. (Theridiidae). The male of *Olios galapagoensis* Banks, 1902 (Eusparassidae) is described.

Introduction

This is the third paper concerning the results of our mission to the Galápagos Islands (February-May 1982) (Baert & Maelfait, 1983, 1984). Four new species are described, belonging to the Ochyroceratidae (2 species), Gnaphosidae (1 species) and Theridiidae (1 species). The male of *Olios galapagoensis* Banks, 1902 is described for the first time. All types are at the Institut royal des Sciences Naturelles de Belgique. All the material was collected by the authors, except where otherwise stated.

Family Gnaphosidae

***Neozimiris santiago* sp.n.** (Figs. 1-2)

Material examined: ♂ holotype, Isla Santiago, transition zone, 260 m, 8 April 1982.

Description (Male holotype, ♀ unknown): Carapace and legs pale orange; abdomen dorsally yellowish, thickly mottled with grey, ventrally whitish and sparsely mottled with grey. Carapace longer than wide. Eye sizes and interdistances (mm): AME 0.07, ALE 0.08, PME 0.09, PLE 0.08, AME-PME 0.03, AME-ALE 0.01, PME-PME 0.02, PME-PLE 0.01, ALE-PLE 0.01. Median ocular quadrangle: length 0.27 mm, anterior width 0.17 mm, posterior width 0.19 mm. Palp with extremely long embolus, arising at base of tegulum; bulbus with prolateral strongly sclerotised small extension; strongly curved median apophysis; extremely sinuous palpal duct; excavated ventral side of cymbial tip with 7 lanceolate hairs; retrolateral tibial

apophysis robust and gradually tapered towards tip. Leg spination: Fe III with 1 and Fe IV with 2 dorsal spines, Ti III and Ta III with 1 ventral spine.

Derivatio nominis: The specific name is a noun in apposition taken from the type locality.

Diagnosis: There are two *Neozimiris* species known from the Galápagos, *N. pinta* Platnick & Shadab, 1976 from Isla Pinta and *N. pinzon* Platnick & Shadab, 1976 from Isla Pinzon, both only known from a unique female. The male here described could possibly belong to one of these two species, but, as two different islets bear different species, it is in our opinion safer to describe this male as a different species. Remarkable is the presence of the lanceolate hairs on the ventral side of the cymbial tip. The presence of such modified hairs is not mentioned in the revision made by Platnick & Shadab (1976) of the genus *Neozimiris*.

Family Ochyroceratidae

***Speocera jacquemarti* sp.n.** (Fig. 3)

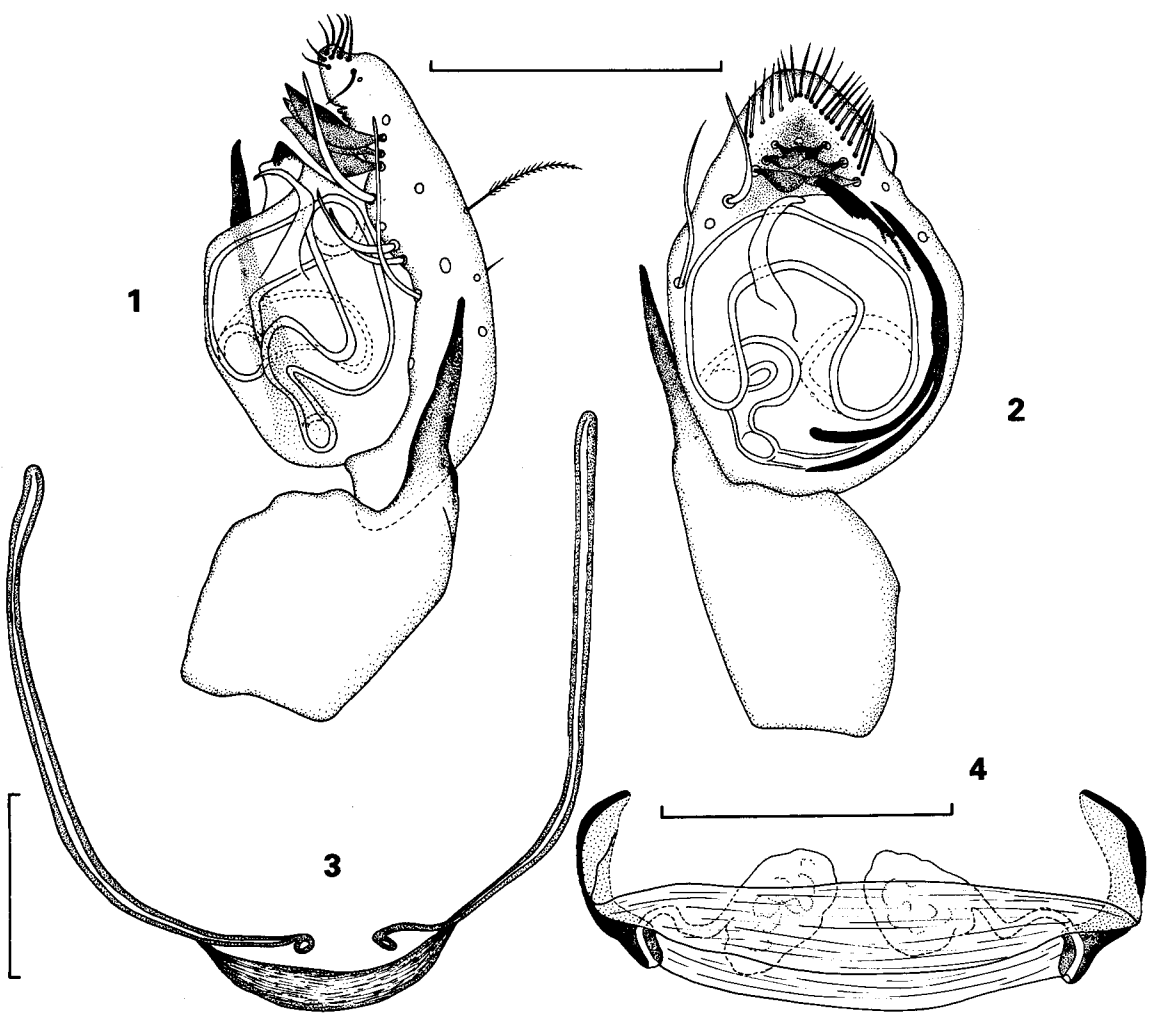
Material examined: Isla Isabela, between volcán Alcedo and volcán Darwin, 12 March 1974 (S. Jacquemart), ♀ holotype together with ♀ paratype (microscopic preparation).

Description (♀ holotype, ♂ unknown): Carapace yellow-brown; legs and abdomen whitish. Carapace slightly longer than broad, broadest in posterior half; eyes hardly visible but present; labium notched, broader than long; chelicerae with normal dentition but with additional retromarginal tooth; vulva with very small globular spermathecal vesiculae, the sclerotised ducts very long and ascending along the sides of the body to an antero-dorsal position. Approximate measurements (in mm): Carapace 0.42 long, 0.38 wide, 0.15 high. Total body length 1.08. Legs (III & IV lacking):

	Fe	Pa	Ti	Mt	Ta	Total
I	0.42	0.10	0.46	0.25	0.22	1.45
II	0.38	0.10	0.36	0.23	0.22	1.29

Derivatio nominis: This species is dedicated to the late Mr S. Jacquemart who collected the specimens.

Diagnosis: This species belongs to the genus *Speocera* Berland, 1914 according to the generic limitations given by Brignoli (1979) on the basis of the genitalia. The sclerotised spermathecal ducts show no wing-like extension. It is easily distinguishable from the other known neotropical *Speocera* species by the form of the spermathecae and cheliceral dentition (2 retro in



Figs. 1-2: *Neozimiris santiago* sp.n., male holotype. **1** Palp, retrolateral view; **2** Palp, ventral view.

Fig. 3: *Speocera jacquemarti* sp.n., female paratype, vulva.

Fig. 4: *Theotima galapagosensis* sp.n., female paratype, vulva. Scale lines = 0.1 mm.

S. amazonica Brignoli, 1978 and *S. irritans* Brignoli, 1978, none in the others).

The spermathecal ducts are long as in *S. minuta* (Marples, 1955), *S. laureata* Komatsu, 1974 and *S. vilhenae* Machado, 1951, but *S. jacquemarti* differs in the form of the spermathecal vesiculae, the cheliceral dentition (2 retro in *S. minuta* and *S. vilhenae,* none in *S. laureata*) and the position of the eyes.

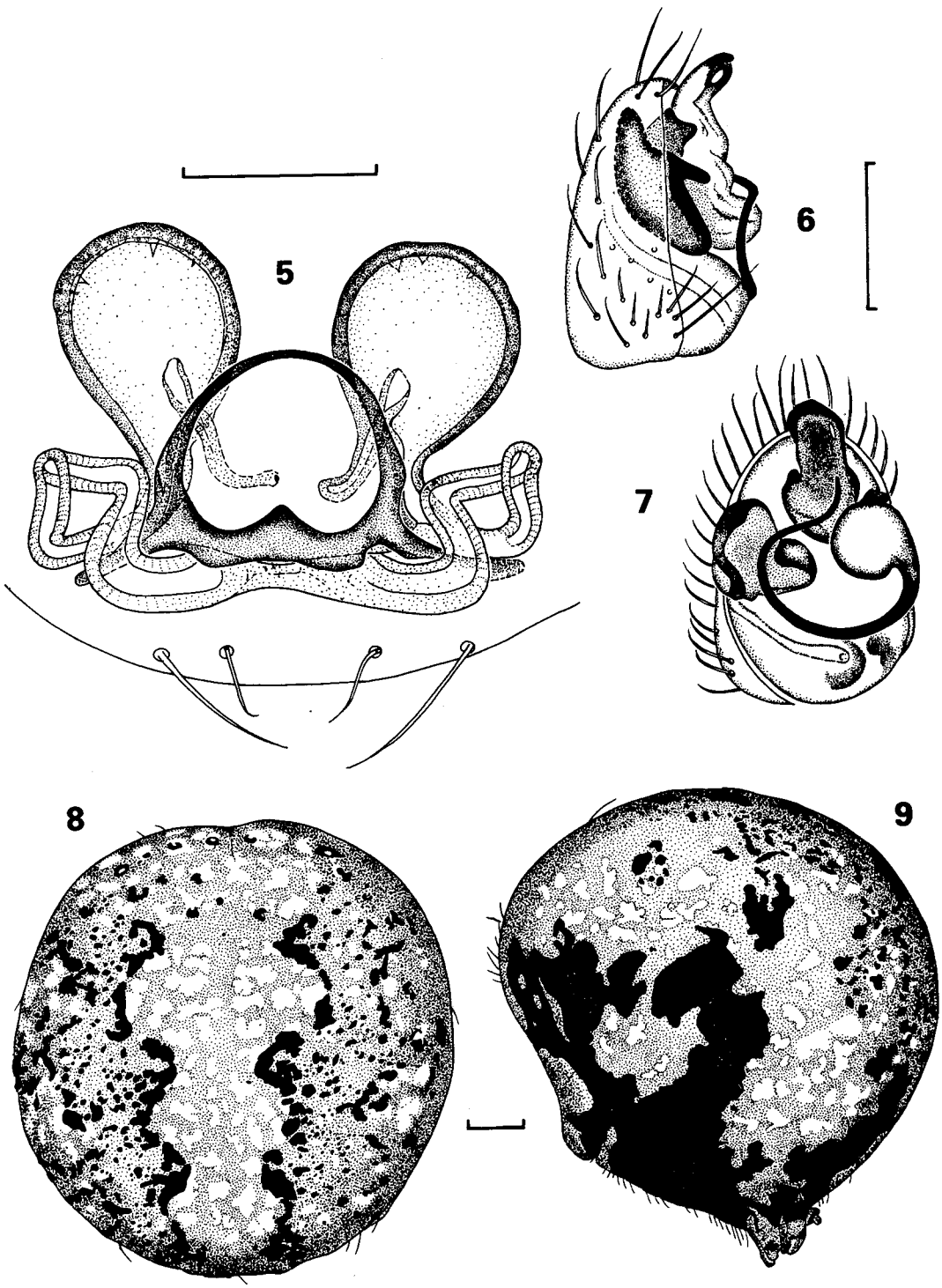
***Theotima galapagosensis* sp.n.** (Fig. 4)

Material examined: ♀ holotype, Isla Santa Cruz, Media Luna, *Sphagnum,* 600 m, 10 March 1982, together with 4 ♀♀ paratypes.

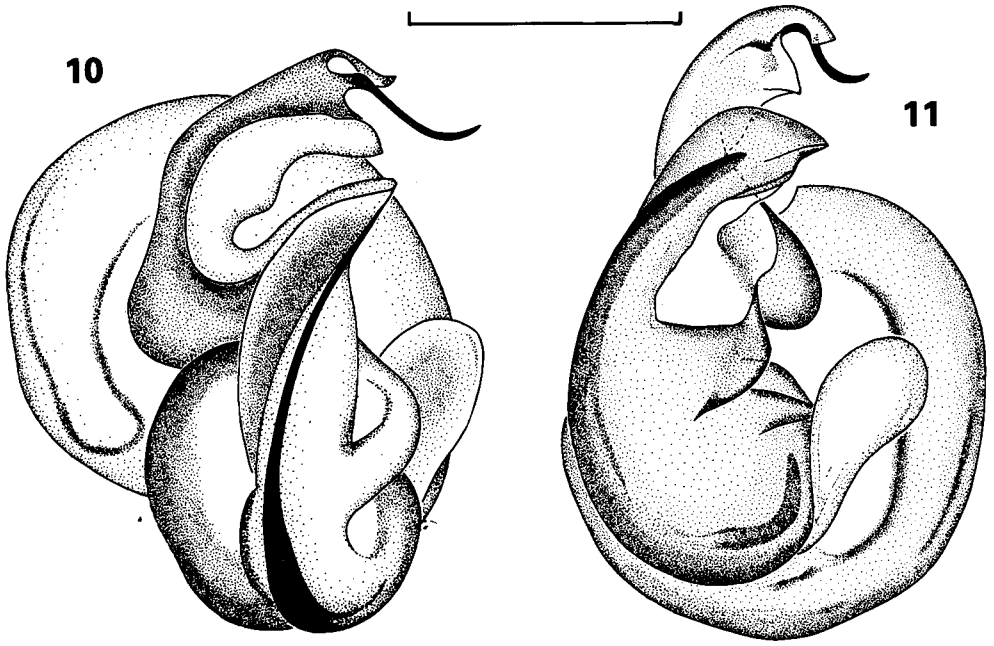
Paratypes: Isla Santa Cruz: Media Luna, *Miconia* zone, 540 m, 8 ♀♀, culture zone, 200-250 m, 2 ♀♀, 10 March 1982; Caseta Occidente, transition zone, 170 m, 17-18 March 1982, 2 ♀♀; Isla San Cristóbal: El Junco lake, fern-sedge zone, 700 m, 3 March 1982, 4 ♀♀; Road between Puerto Baquerizo and El Progreso, culture zone, 250 m, 4 March 1982, 26 ♀♀ (Baert & Maelfait leg.).

Isla Santa Cruz: *Scalesia* zone, 11 January 1974, ♀; *Miconia* zone, 15 February 1974, 2 ♀♀; *Scalesia* zone, 17 February 1974, ♀; Isla San Cristóbal: 31 January 1974, 39 ♀♀ (S. Jacquemart leg.).

Description (♀, ♂ unknown): Carapace light yellow



Figs. 5-9: *Theridion coldeniae* sp.n. **5** Female paratype, vulva; **6** Male paratype, palp, mesal view; **7** Ditto, ventral view; **8** Female paratype, abdomen, dorsal view; **9** Ditto, lateral view. Scale lines = 0.1 mm (5), 0.5 mm (6-9).



Figs. 10-11: *Olios galapagoensis* Banks, 1902. **10** Bulbus, mesal view; **11** Ditto, ventral view. Scale line = 0.5 mm.

with black border and brown-grey striae; legs whitish, mottled with black; abdomen brown-grey with at both sides a longitudinal creamy stripe. Carapace much longer than broad, slightly elevated in middle; 6 eyes, eye-area slightly elevated; labium notched, broader than long; chelicerae with normal dentition but with two supplementary teeth on retromargin; vulva with short spermathecal ducts, vesiculae voluminous in contrast with short ducti, sclerotised sickle-shaped external plates. Approximate measurements (in mm) (♀ holotype): Carapace 0.48 long, 0.38 wide, 0.15 high. Total length 0.99. Legs:

	Fe	Pa	Ti	Mt	Ta	Total
I	0.46	0.12	0.43	0.32	0.26	1.59
II	0.43	0.12	0.34	0.28	0.22	1.39
III	0.35	0.12	0.38	0.27	0.20	1.32
IV	0.44	0.12	0.42	0.33	0.24	1.55

Derivatio nominis: The species name is derived from the geographic name Galápagos.

Diagnosis: This species is a *Theotima* according to the presence of the short vulval outer wing-like extensions. There is a close resemblance to *Speocera bonaespei* Brignoli, 1980 from the Seychelles. There are, however, very small differences in shape of the spermathecal vesiculae, the stronger sclerotisation of the sickle-shaped wings of reinforcement, and size of the body and legs. It is hard to believe that two small island groups at so great a distance from each other could bear the same tiny ochyroceratid species, unless we are dealing with a circum-tropical species. This has, however, to be proved by further discoveries in all tropical regions of the world between both archipelagos.

As there is little differentiation in females, we find it preferable to describe it for the time being as a separate species as long as no males are found. We must, however, also bear in mind that the possibility exists that we are dealing with a parthenogenetic species (cf. Machado, 1951).

We consider that the sickle-shaped extensions correspond to the wing-like reinforcement structures of *Theotima*. In that case, *Speocera bonaespei* should also be considered as a *Theotima* species. The spermathecal ducts being short or long, and the vulva bearing wings of reinforcement or not, are in our opinion weak generic characters.

Family Theridiidae

***Theridion coldeniae* sp.n.** (Figs. 5-9)

Material examined: ♂ holotype, Isla Santiago, Bucanero Cove, in *Coldenia* vegetation, 5-10 m, 9 April 1985.

Paratypes: Isla Santiago: Bucanero Cove, 9 April 1982, 13 ♂♂, 9 ♀♀, 8 juv.; Cerro Cowan, 260 m, 7 April 1982, ♀, juv.; Isla Isabela: Beagle Crater, 5-250 m, 22-24 February 1982, 2 ♂♂, 5 ♀♀, juv.; Volcán Alcedo, 10 m, 550 m, 700 m and 800 m, 21-23 April 1982, 12 ♂♂, 27 ♀♀, 23 juv.; Isla Santa Cruz: Bahia Tiburon, 1-2 m, 18 April 1982, 2 ♀♀; Bahia Nuñez, 1-2 m, 18 February 1982, ♀; Isla Venecia, 0-1 m, 17 April 1982, ♀; Isla Santa Fe: 1-2 April 1982, 2 ♀♀ (Baert & Maelfait leg.).

Isla Isabela, between volcán Alcedo and volcán Darwin, 12 March 1974, ♀ (S. Jacquemart leg.); Isla Santa Cruz, Bahia Tortuga, January 1965, ♀ (L. & N. Leleup leg.); Isla Santiago, Los Guayabillos, 270 m, 6 April 1982, ♀ (Y. Lubin leg.).

Description (♂/♀): ♂: Carapace yellow-white with black border and median black stripe which narrows anteriorly between PM eyes; dark brown eye rims; clypeus with median black spot; sternum yellow-white with black border; legs yellow-white with indistinct black ring-like markings. Abdomen creamy white with a latero-dorsal lobate longitudinal band, a lateral black stripe running ventrally and fusing at the venter into a black spot. ♀: Carapace black with a yellow dorsal U-shaped mark; dark brown eye rims; sternum black with an antero-median yellow spot at base of labium; legs

yellow with very pronounced dark annulation marks at the extremity and middle of each article. Abdomen, see Figs. 8 & 9. ♂♀: Clypeus length twice diameter of AM eye, strongly concave just below eyes, with a boss under each AM eye (in ♀ boss smaller); AM one diam. apart and ⅓ from AL (in ♀ nearly ¼); PM one diam. apart and a little more than one diam. from PL (in ♀ approx. 0.7 of distance between PL eyes). Two long bent spines in MOQ. Approximate measurements (in mm): ♂: Carapace 1.04 long, 0.87 wide, 0.44 high; ♀: 0.86 long, 0.78 wide, 0.34 high. Total body length: ♂: 2.5 (holotype). Legs (♀ paratype measurements in brackets):

	Fe	Pa	Ti	Mt	Ta	Total
I	2.00 (1.33)	0.41 (0.33)	1.76 (1.08)	1.72 (1.03)	0.71 (0.31)	6.60 (4.08)
II	1.31 (0.98)	0.35 (0.33)	1.08 (0.67)	1.08 (0.69)	0.65 (0.41)	4.47 (3.08)
III	0.94 (0.69)	0.30 (0.26)	0.63 (0.39)	0.76 (0.49)	0.43 (0.35)	3.06 (2.18)
IV	1.39 (1.11)	0.35 (0.29)	0.96 (0.65)	0.96 (0.75)	0.55 (0.45)	4.21 (3.25)

Variation: Some females from Isla Isabela and Santa Fe are totally black, apart from the abdominal dorsal longitudinal lobate creamy band. The total length of the measured males varies between 1.70 and 2.50 mm, in females it varies between 1.50 and 2.70 mm.

Habitat: Mostly found in the dry arid zone near the coast, especially in the low *Coldenia* vegetation, but also among *Sesuvium* plants and mangrove litter (on Isla Venecia). At higher altitudes, it was found among low grasses and under stones (Cerro Cowan, Isla Santiago).

Derivatio nominis: Named after the genus *Coldenia,* a small Borage plant (Boraginaceae) forming dense mats, wherein this species was mostly found.

Diagnosis: This species belongs to the *Theridion murarium* group (Levi, 1957, 1959, 1963) and is easily distinguishable from all other species belonging to this group, by the median apophysis, embolus and conductor of the male, and by the general form of the vulva.

Family Eusparassidae

***Olios galapagoensis* Banks, 1902** (Figs. 10-11)

This species was first described from females by Banks in 1902. The male was then unknown and has never been described.

Material examined: Isla Santa Cruz: CDRS building, 9 February 1982, ♂; Caseta Media Luna, 10 February 1982, ♂; Los Gemelos, 580 m, 13 March 1982, ♂ (Baert & Maelfait leg.). Isla Pinta, 390 m, 7 February 1982, ♂ (Y. Lubin leg.); Isla Santa Cruz, CDRS, October 1964, ♂ (L. & N. Leleup leg.).

Description of male: Carapace yellowish with light brown striae; chelicerae deep brown; sternum yellow; labium and gnathocoxae brown with yellow tip; palp yellow; legs brown with yellow femora; abdomen creamy with a succession of transverse bars in the posterior half; 4 impressed creamy dots; sides creamy, mottled with dark patches; venter with broad grey-brown band with central creamy marking, the whole bordered by a longitudinal creamy stripe. Approximate measurements based upon 3 ♂♂ (in mm): Carapace 6.2-8.5 long, 5.3-6.6 wide. Total length 11.26-15.0. Eye interdistances: AM-AM 0.54-0.73 of AM; AM-AL 0.35-0.39 of AM; AL-PL 0.56-0.67 of AL; PM-PM 1.15-1.26; PM-PL 1.45-1.50 of PM; PM-AM 1-1.21 of PM. Median ocular quadrangle: longer than wide (L/W = *c.* 1.08); anterior width equal to or slightly less than posterior width. Legs (♂ from Caseta Media Luna): FeI 8.7, FeII 10.0, FeIII 7.8, FeIV 7.9.

Diagnosis: Only one species of this genus is known in the Galápagos. The males described here surely belong to *O. galapagoensis* as they were found in the same habitat as females.

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