

AMERICAN *NEOSCONA* AND CORRECTIONS TO
PREVIOUS REVISIONS OF NEOTROPICAL ORB-WEAVERS
(ARANEAE: ARANEIDAE)

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INTRODUCTION

One of the first revisions of American araneids was that of *Neoscona* (Berman and Levi, 1971). At the time I was undecided whether to revise the Nearctic and Neotropical species together or separately. Soon it became evident that, although undesirable, a geographic division had to be made. Most of the Nearctic species were well represented in collections but there were only a few specimens of the Neotropical species. Collections of the American Museum of Natural History and the Museum of Comparative Zoology were the main ones used. At present large collections of Neotropical spiders are available on loan which we did not have in 1970. Grasshoff's revision (1986) of African *Neoscona* found that Africa and America share some species but that Africa has species belonging to the subgenus *Afraranea* which are not found in the Americas. But since most of the *Neoscona* species are found in the area of eastern Asia and western Pacific, our knowledge of *Neoscona* species is still limited. *Neoscona* species are easily transported and are part of the unfortunate homogenization of the world fauna. I suspect that the new *Neoscona marcanoi* from Hispaniola, and *N. oaxacensis* (Keyserling) may be the only native species found in the American tropics. This paper is an addition to the previous revision (Berman and Levi, 1971).

The records of specimens included in previous maps (Berman and Levi, 1971) have not been individually listed; most came either from the AMNH or MCZ collections. In the present paper, the previous localities are plotted again, together with the new records, which are listed together with their collections.

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This paper also includes corrections and additions to previous monographs. After completion of a generic revision, I invariably get specimens sent to me that cannot be determined with my keys and illustrations. Most turn out to be new species. Also I find omissions, errors and misprints. However, the omission of a previously described species, and perhaps one whose genitalia have not been illustrated before, may lead to a redescription as a new species and a possible later synonymy. Also some species turn out to be misplaced, a discovery made only after a specimen of the other sex becomes known. This also has to be corrected.

Credits. I would like to thank the curators of the following museums and the individuals who loaned specimens.

AD, A. Dean, Texas A and M University, College Station, Texas
AMNH, American Museum of Natural History, New York; N.

Platnick, L. Sorkin

BMNH, The Natural History Museum, London, England; P.
Hillyard, F. Wanless

CAS, California Academy of Sciences, San Francisco; W. J.
Pulawski, D. Ubick

CD, C. Deeleman, Ossendrecht, Netherlands

CV, C. Valderrama A., Bogotá, Colombia

FSCA, Florida State Collection of Arthropods, Gainesville,
Florida; G. B. Edwards

IBNP, Inventario Biologico Nacional, Paraguay; J. A. Kochalka

INPA, Instituto Nacional de Pesquisas da Amazonia, Manaus, Est.
Amazonas Brazil; J. A. Raphael

JAK, J. A. Kochalka, Ciudad Universitaria, Paraguay

JMM, J. M. Maes, León, Nicaragua

MACN, Museo Argentino de Ciencias Naturales, Buenos Aires,
Argentina; E. A. Maury

MECN, Museo Ecuatoriano de Ciencias Naturales, Quito, Ecuador;
L. Avilés

MCN, Museu de Ciências Naturais, Porto Alegre, Rio Grande do
Sul, Brazil; E. H. Buckup

MCZ, Museum of Comparative Zoology, Cambridge, Massachu-
setts

MEG, M. E. Galiano; Buenos Aires, Argentina

MLP, Museo de Universidad Nacional, La Plata, Argentina; R. F.
Arrozpide

- MNHNC, Museo Nacional de Historia Natural, Habana, Cuba; G. Alayón
- MNSD, Museo Nacional de Historia Natural, Santo Domingo, República Dominicana
- MNRJ, Museu Nacional, Rio de Janeiro, Brazil; A. Timotheo da Costa
- MUCC, Museo de Biología, Universidad Central, Caracas, Venezuela, J. Racenis
- MUSM, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru; D. Silva D.
- MZSP, Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil; P. Vanzolini, L. Neme, J. L. M. Leme
- PAN, Polska Akademia Nauk, Warszawa, Poland; A. Riedel, W. Starega, J. Proszynski, A. Slojewska, E. Kierych
- SMF, Forschungsinstitut Senckenberg, Frankfurt am Main, Germany; M. Grasshoff
- USNM, National Museum of Natural History, Smithsonian Institution, Washington, D.C.; J. Coddington
- ZMK, Zoologisk Museum, København, Denmark; H. Enghoff

I would also like to thank J. Martinez for a California record and E. Buckup for determining *Neoscona* in the MCN and sending me the records. E. Buckup, A. Lise, and L. Leibensperger made me aware of some errors, misprints and omissions in previous monographs. A. Dean, C. Deeleman, H. Höfer, and A. A. Lise contributed specimens. E. Buckup, M. Grasshoff, and L. Leibensperger read the paper and made suggestions for improvement.

Neoscona Simon

Neoscona Simon, 1864: 261. Type species designated by F. P.-Cambridge, 1904: *Epeira arabesca* F. P.-Cambridge.

Diagnosis. Male palpal patella with two macrosetae and with oval median apophysis of palpus bearing a proximal "upper" recurved tooth (similar in all species, M in Fig. 6). *Neoscona* differs from other araneid genera with two palpal macrosetae (*Ara-neus*, *Aculepeira*, *Larinia*, *Metepeira*) by the structure of the palpus (Figs. 6–8, 16; 1971, figs. 4–6): a large area of the bulb is a folded basal hematodocha (H), and only a small area has sclerites.

Unlike in other genera, the sclerites are partly hidden by a wide cymbium (Y, Fig. 6) which touches a small median apophysis (M); the radix is fused to the stipes or has a joint; the stipes is distally three-partite with a conical embolus (E), an embolus lamella (L), and a terminal apophysis (A), the last two only lightly sclerotized. There is almost no distal hematodocha between embolus and terminal apophysis.

Female *Neoscona* differ from other genera by a curved, spatula-shaped epigynum whose sclerites appear fused (Figs. 1–3). The epigynum of *N. nautica* (Fig. 10) can be confused with that of *Ocrepeira* species.

Unrecognizable. *Neoscona nigrovariata* Mello-Leitão, 1941:258.

The species north of the Isthmus of Tehuantepec are: *Neoscona arabesca*, *N. domiciliorum*, *N. crucifera* (= *N. hentzii*), *N. nautica*, *N. oaxacensis*, *N. orizabensis*, *N. pratensis*, *N. utahana*.

Misplaced by Berman and Levi (1971) was *N. redempta* (Gertsch and Mulaik) which is *Ocrepeira redempta* (Levi, in press).

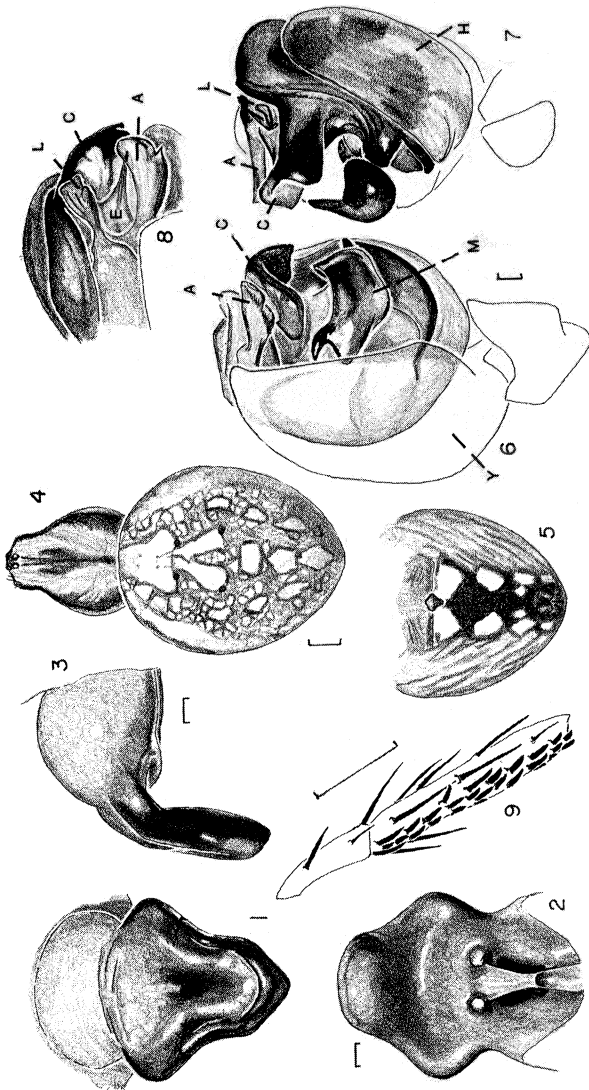
The Central American species are *N. arabesca*, *N. nautica*, and *N. oaxacensis*.

The West Indian species are *N. moreli*, *N. nautica*, and *N. marcanoï* n. sp., with only *N. marcanoï* native, the other two introduced.

The South American species are *N. oaxacensis* and the introduced *N. moreli* and *N. nautica*. The distinguishing characters of these species are the dorsal pattern of the abdomen, the shape of the epigynum and the conductor (C in Figs. 6–8, 16), the terminal apophysis (A), and the embolus lamella (L) of the palpus.

Key to the species of South American *Neoscona*

1. Females2
- Males4
- 2(1) Abdomen rounded, *Araneus*-like; only slightly longer than wide (Fig. 11). Epigynum about as wide as long (Fig. 10)*nautica*
- Abdomen oval and elongate (Figs. 15, 19, 23); epigynum distinctly longer than wide (Figs. 14, 18, 22)3



Figures 1-9, *Neoscona marcanoi* n. sp. 1-5, female. 1, epigynum, ventral. 2, epigynum, ventral. 3, epigynum, lateral. 4, dorsal. 5, abdomen, ventral. 6-9, male. 6-8, left palpus. 6, ventral. 7, lateral. 8, apical. 9, left second patella and tibia, anterior.
 Scale lines 1 mm, genitalia, 0.1.
 Abbreviations. A, terminal apophysis. C, conductor. E, embolus. H, hematodocha. L, embolus lamella. M, median apophysis. Y, cymbium.

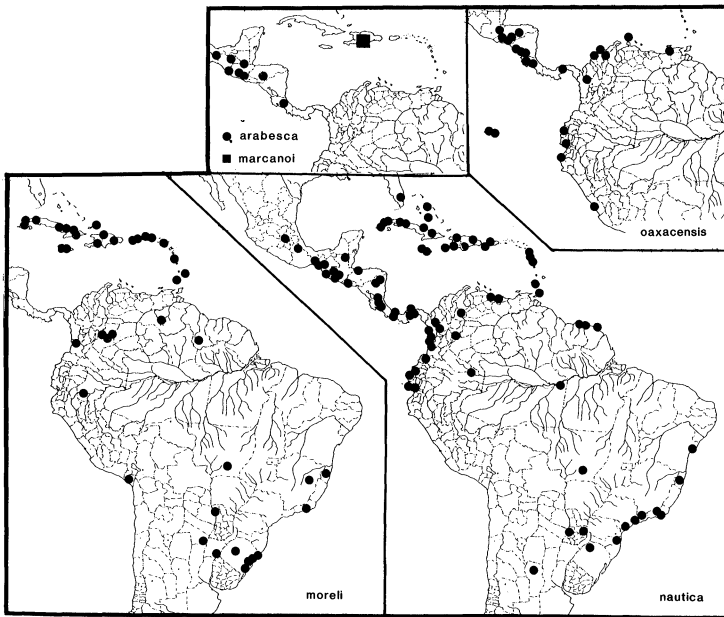
- 3(2)Abdomen with dorsal median band having wavy border, wider anteriorly than posteriorly (Fig. 23); epigynum in posterior view 2.5 times as long as wide (Fig. 22; 1971, figs. 78–80)*oaxacensis*
- Abdomen with dorsal median band having a straight border (Fig. 19); epigynum length in posterior view less than two times its width (Fig. 18; 1971, figs. 91–95).....*moreli*
- 4(1)Fourth coxa with a soft tubercle (1971, fig. 9)5
- Fourth coxa without tubercle.....*nautica*
- 5(4)Abdomen with median light band with straight border (Fig. 19, 1971, fig. 100); palpus in lateral view with conductor (C) almost straight, embolus lamella (L) pressed flat against tegulum (T) and only side of terminal apophysis (A) visible (Fig. 20)*moreli*
- Abdomen with median light band with wavy border (Fig. 23, 1971, figs. 88–90); palpus in lateral view with conductor S-shaped and having the proximal end with a curved shelf; only side of lamella (L) and top of terminal apophysis (A) visible in lateral view of palpus (Fig. 24)*oaxacensis*

Neoscona marcanoi new species

Figures 1–9; Map 1

Holotype. Female holotype and eight female and one male paratypes from Terreno Salado between Neiba and Duvergé, Dominican Republic, Hispaniola, 25 Oct. 1980 (E. Marcano F.), in MNSD, 2♂ paratypes in MCZ. The species is named after the collector.

Description. Female holotype: Carapace light yellowish, darker in median band and on sides. Sternum orange, underlain by median white pigment band. Coxae orange; legs yellow. Dorsum of abdomen with median band of large white patches, smaller one on the sides (Fig. 4); venter black with four white patches and a pair of white spots on each side of spinnerets (Fig. 5). Posterior median eyes 0.9 diameter of anterior medians, laterals 0.8 diameter. Anterior median eyes slightly less than their diameter apart, two diameters from laterals. Posterior median eyes 0.6 diameter apart, 3 diameters from laterals. Height of clypeus 0.6 diameters of anterior median eye. Abdomen an elongate oval (Fig. 4). Total length 10.3



Map 1, Distribution of Neotropical *Neoscona* species.

mm. Carapace 5.1 mm long, 4.0 wide, behind lateral eyes 1.8 wide. First femur 5.7 mm, patella and tibia 6.9, metatarsus 5.7, tarsus 1.4. Second patella and tibia 5.9 mm, third 3.5, fourth 5.8.

Male paratype: Color as in female, but venter of abdomen gray with white spots touching. Posterior median eyes 0.7 diameter of anterior medians, laterals 0.7 diameter. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes their diameter apart, 2.3 diameters from laterals. Height of clypeus 0.6 diameter of anterior median eye. Endite with tooth, palpal femur with tooth. First coxa with hook, fourth with a tubercle on posterior face. Second tibia thicker than first, swollen, with prolateral macrosetae (Fig. 9). Abdomen oval. Total length 7.0 mm. Carapace 3.6 mm long, 2.7 wide, behind lateral eyes 1.1 wide. First femur 4.8 mm, patella and tibia 6.3, metatarsus 5.7, tarsus 1.3. Second patella and tibia 4.3 mm, third 2.6, fourth 4.6.

Note: This is probably a native species, not introduced. Males and females were collected together. Illustrations were made from holotype and paratype.

Diagnosis. The female differs from that of *N. moreli* by a shorter abdomen, marked dorsally with light spots (Fig. 4), and by a shorter, wider epigynum (Fig. 1) which is wider at the lateral lobes than at its base (Fig. 2). The male differs by having the conductor with a dark, sclerotized lobe (Fig. 7) and by the shape of the terminal apophysis (A) and embolus lamella (L) (Figs. 7, 8). The second tibia has a dense field of setae (Fig. 9).

Paratype. DOMINICAN REPUBLIC: 1 km S Las Matas de Far-tan, 25 Aug. 1970, ♀ (B. Patterson, MCZ).

Neoscona nautica (L. Koch)

Figures. 10–13; Map 1

Epeira tristis Taczanowski, 1873: 131. Female holotype from Iles de Salut, French Guiana in PAN, examined. Name preoccupied by *Epeira tristis* Blackwall, 1862. Synonymized by Berman and Levi, 1971.

Epeira nautica L. Koch, 1875: 17. pl. 2, fig. 2., ♀. Female holotype from Suakin [Sudan], in BMNH, examined.

Epeira volucripes Keyserling, 1885: 528, pl. 13, fig. 27, ♀. Female syntypes from Panama and Haiti in MCZ, examined.

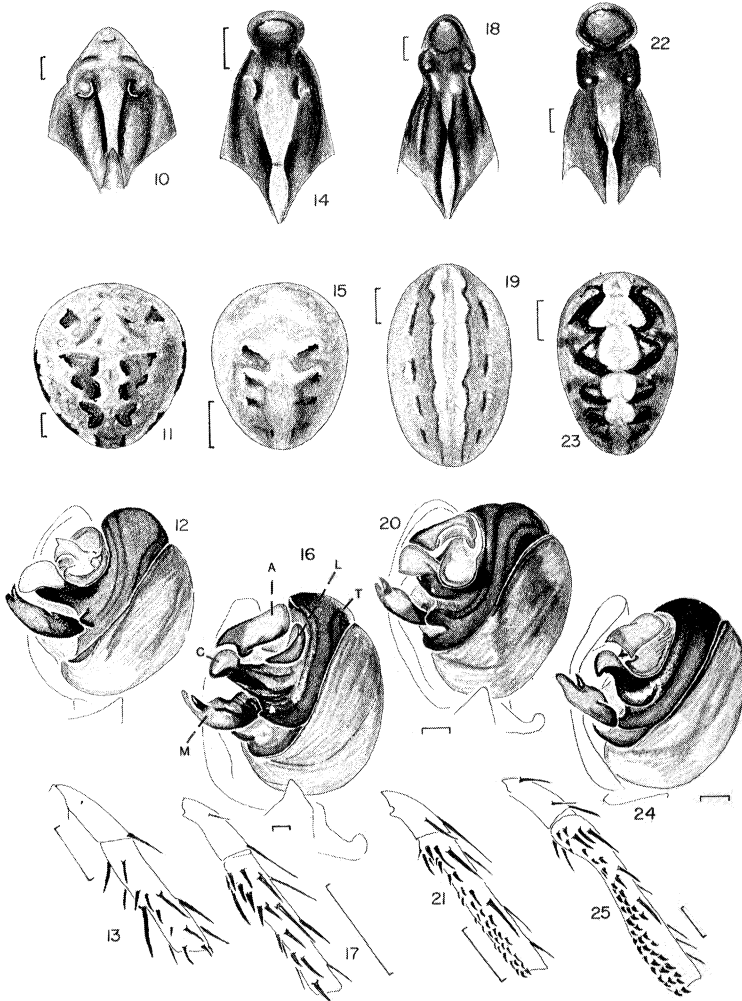
Neoscona volucripes: – F. P.-Cambridge, 1904: 473, pl. 44, fig. 18, ♀.

Aranea tristimonae Petrunkevitch, 1911: 320. New name for *Epeira tristis* Taczanowski, preoccupied. Synonymized by Berman and Levi, 1971.

Araneus marcuzzii Caporiacco, 1955: 355, fig. 35, ♀. Female holotype from Carúpano, Sucre, Venezuela, in MUCC, examined. Synonymized by Berman and Levi, 1971.

Neoscona nautica: – Berman and Levi, 1971: 498, figs 111–120, ♀, ♂. Grasshoff, 1986: 46, figs. 60–63, ♀, ♂, map 6.

Diagnosis. The female abdomen is almost as wide as long (Fig. 11) and can be confused with that of *Araneus* species; unlike in other American *Neoscona* the terminal apophysis of the palpus is very small (Fig. 12); the second tibia (Fig. 13) lacks the dense field of short setae present in *N. moreli*.



Figures 10–13, *Neoscona nautica*. 10, epigynum, posterior. 11, abdomen of female. 12, male left palpus, lateral. 13, male left second patella and tibia, anterior. Figures 14–17, *N. arabesca*. 14, epigynum, posterior. 15, abdomen of female. 16, male palpus, lateral. 17, male second patella and tibia, anterior. Figures 18–21, *N. moreli*. 18, epigynum, posterior. 19, abdomen of female. 20, male palpus, lateral. 21, male second patella and tibia, anterior. Figures 22–25, *N. oaxacensis*. 22, epigynum, posterior. 23, abdomen of female. 24, male palpus, lateral. 25, male second patella and tibia, anterior.

Scale lines 1 mm; genitalia 0.1.

Abbreviations. A, terminal apophysis. C, median apophysis. L, embolus lamella. M, median apophysis. T, tegulum.

Note. The illustrations were made from a female from Depto. Antioquia, the male from Depto. Valle, Colombia, the male tibia and patella from Puerto Rico.

Distribution. Cosmotropical: widespread in tropical areas of Africa; in America from Virginia, Texas, and the West Indies to Argentina. It is probably introduced to America.

New records. CUBA *Holquin:* Farallones de Moa (MNHNC). *Habana:* Ojo de Agua de Nico, S. A. Baños (MNHNC). HAITI Port au Prince (MCZ). MONA ISLAND (MCZ). GUATEMALA *Suchitepequez:* San Julian (AMNH). *Peten:* Tikal ruins (MCZ). *Chimaltenango:* Yepokapa (AMNH, USNM). NICARAGUA *Bonanza* (AMNH); *El Castillo* (JMM, MCZ). COSTA RICA *Heredia:* La Selva (AMNH). *San José:* San José (CAS). PANAMA *Boca del Toro:* Coroente Grande, Changuinola (MCZ); Río Changuinola nr. Quebrada El Guabo (AMNH). *Chiriquí:* David (AMNH), Balboa (AMNH). VENEZUELA *Carabobo:* San Esteban (AMNH). SURINAM *Morowijne:* Langaman (AMNH). COLOMBIA *César:* Valledupar (JAK). *Cundinamarca:* Tibirita, in house (MCZ). *Guajira:* Maicao (AMNH). *Antioquia:* Mutatá Cancheras (MCZ); Medellín (MCZ). *Chocó:* Mutis, Bahia Solano (CAS); between Cucurupí and Noanama, Río San Juan (AMNH); Caño nr. Cucurupí, Río San Juan (AMNH); 20 km N Palestina, Río San Juan (AMNH). *Valle:* Centr. Hld. Anchicayá (MCZ). *Amazonas:* Araracuara, 270 m (CV). *Nariño:* Reserva Nat. La Planada, Ricaurte, 1350 m (CV). ECUADOR *Guayas:* Guayaquil (CAS, MACN); Colonche (CAS). *Manabi:* Crucita, 0°52'S, 80°32'W (MCZ); El Carmen (MECN). BRAZIL *Amazonas:* Maués (INPA). *Bahia:* Itamaraju (MNRJ). *Rio de Janeiro:* Rio de Janeiro (ZMK); Petrópolis (AMNH). *Mato Grosso:* Chapada dos Guimarães (AMNH). *Santa Catarina:* Corupá (AMNH). *São Paulo:* Jiquiá (MZSP); Piquete (MZSP); Santos (MZSP); Raiz de Serra (MZSP). *Rio Grande do Sul:* Santa Rosa (MCN). PARAGUAY *Central:* Asuncion (MNRJ). *Alto Paraná:* km 12 de Stroessner, Centro Forestal de Alto Paraná (IBNP). ARGENTINA *Córdoba:* General Paz (MLP).

Neoscona arabesca (Walckenaer)

Figures 14–17; Map 1

Epeira arabesca Walckenaer, 1841: 74. The name was given to the specimen illustrated by L. A. G. Bosc, unpublished. Araignées

de Caroline, p. 13, pl. 5, fig. 2, in the library of The Natural History Museum, London.

Neoscona arabesca: – Berman and Levi, 1971: 474, Figs. 14 to 35, ♀, ♂.

Diagnosis. This is the smallest and commonest North American species. The female has an egg-shaped abdomen, with characteristic pairs of diagonal marks (Fig. 15 and 1971, figs. 34, 35). The male has the edge of the embolus lamella (L) and terminal apophysis (A) almost parallel and the conductor (C) relatively straight (Fig. 16). The male left second tibia (Fig. 17) lacks the field of short setae present in some other *Neoscona* species.

Note. The illustrations of the female were made from an individual from Costa Rica, that of the male palpus from a specimen from Talapa, Mexico, the patella and tibia from a male from Cuba.

Natural History. Specimens came from a sorghum field in Honduras; others were found in meadows and open areas.

Distribution. Common from southern Canada and the United States south to Costa Rica, Bahamas, Cuba, Hispaniola, and Jamaica.

New records. GUATEMALA Antigua: Finca Salinas, 29 June 1980, 3♀ (J. Schuster, FSCA). HONDURAS 37 km E Tegucigalpa, sorghum fields, ♀, 2 Dec. 1982 (R. W. Jones, MCZ). COSTA RICA San José: San José, ♀, ♂ (E. Schmidt, AMNH).

Neoscona crucifera (Lucas)

Epeira crucifera Lucas, 1839: 42, pl. 6, fig. 3. Specimens from the Canary Islands.

Epeira hentzii Keyserling, 1864: 97, pl. 5, fig. 10, 11, ♀. Female lectotype designated by Berman and Levi, 1971 in BMNH. Synonymized by Grasshoff, 1986.

Neoscona hentzii: – Berman and Levi, 1971: 478, figs. 51–58.

Neoscona crucifera: – Grasshoff, 1986: 62, figs. 79–84, ♀, ♂, map 9; Martínez (in press).

Diagnosis. The abdomen is almost as wide as long.

Natural history. Martínez reports (personal communication Feb. 1992) that the species is getting more abundant in southern California and builds webs higher up than the webs of *N. oaxacensis*.

Distribution. New England to California and central Mexico; Canary Islands Madeira and Porto Santo, Africa. Presumably this

species has been carried from America to Africa. Heretofore unknown from California.

New record. CALIFORNIA Long Beach, Rancho Los Cerritos, 1 Nov. 1991, 5♀ (M. J. Martinez, MCZ).

Neoscona moreli (Vinson)

Figures 18–21; Map 1

Epeira morelii Vinson, 1863: 166, 309, pl. 4, fig. 4. Specimens from Réunion.

Araneus neotheis Petrunkevitch, 1911: 305. New name for *Epeira theisi*: – Keyserling, which was thought misidentified. First synonymized by Grasshoff, 1986.

Neoscona neotheis: – Berman and Levi, 1971: 490, figs. 91–100, ♀, ♂.

Neoscona moreli: – Grasshoff, 1986: 561, figs. 71–78, ♀, ♂.

Diagnosis. The abdomen is slender and usually has a median light band with almost straight margins (Fig. 19). The conductor of the male palpus is relatively straight and the terminal apophysis has a concave edge (Fig. 20). The second tibia of the male has a dense field of short setae (Fig. 21).

Note. Figure 18 was made from a female from Depto. Valle, Colombia, Fig. 19 from Puerto Rico and Fig. 20 from a male from Depto. Meta, Colombia, Fig. 21 from a male from Cuba.

Natural History. Specimens were collected in Puerto Rican mountains, in an open abandoned parking lot, in high grasses and herbacious vegetation, and in a soybean field in Palmira, Valle, Colombia.

Distribution. Widespread in Subsaharan Africa, Madagascar, Réunion, Mauritius and Seychelles, West Indies, and with scattered records in South America (Map). I assume the species is an introduction to the Americas, judging by the limited American, and widespread African distribution.

New records. CUBA *Santiago de Cuba*: La Gran Piedra (MCZ). DOMINICAN REPUBLIC *Monte Cristi*: ca. desemboca Jura del Río Yaque del Norte (F. Alayón, MNHNC). BAHAMA ISLANDS South Caicos (AMNH). VIRGIN ISLANDS St. Croix (AMNH, ZMK), St. Johns (AMNH), Tortola (AMNH), Little Camonoe (AMNH). NEVIS Charlestown (AMNH). MARTINIQUE Fort de

France (MCZ). GRENADA (AMNH). VENEZUELA *Bolívar*: Maripa, Río Cauca (MCZ). GUYANA *Rupununi*: Mountain Points, 30 km from Dadanawa (G. F. Mees, CD). COLOMBIA *Meta*: Carimagua, (Eberhard 607, MCZ); 15 km SW Puerto Lopez (Eberhard 1573, MCZ); Hacienda Mozambique, 15 km SW Puerto Lopez (W. Eberhard, MCZ); 20 km N Río Muco, 20 km S El Porvenir (W. Eberhard, MCZ). *Valle*: Lago Calima (W. Eberhard, MCZ); Jamundi, Finca Ceibalito (H. Bastidas, MCZ); Palmira (MCZ). PERU *Loreto*: Barranca (CAS). *Tacna*: S Camiara (AMNH). BRAZIL *Terr. Amapá*: Macapá (J. Becker, MEG) in nest of *Eumenes canaliculatus*. *Bahia*: Itamaraju (MNRJ). *Minas Gerais*: Viçosa (MNRJ). *Mato Grosso*: Chapada dos Guimarães (M. Alvarenga, AMNH). *Rio de Janeiro*: Cidade (AMNH, MCZ). *São Paulo*: Guarujá (AMNH). *Rio Grande do Sul*: Capão da Canoa (MCN); Itapuã, Porto Alegre (MCN); Pelotas (AMNH); Santa Maria (MCN); Torres (MCN); Viamão, (MCN); Xangrilá (MCN). PARAGUAY *Concepción*: Fonciere, imm. (E. Reimoser, MCZ). ARGENTINA *Chaco*: Basail (M. Biraben, MACN). *Corrientes*: Solari (M. Biraben, MLP).

Neoscona oaxacensis (Keyserling)

Figures. 22–25; Map 1

Epeira oaxacensis Keyserling, 1863: 121, pl. 5, figs. 15, 16, ♀.

Female holotype from Oaxaca, Mexico in BMNH, examined.

Epeira cooksonii Butler, 1877: 76, pl. 13, fig. 2, ♀. Six female syntypes from Albemarle Island, Galapagos, in BMNH, examined.

Synonymized by Berman and Levi, 1971.

Epeira adiantoides Taczanowski, 1878: 148, pl. 1, fig. 4, ♀.

Female syntypes from Chorillos [now suburb of Lima], Peru in PAN, examined. Synonymized by Berman and Levi 1971.

Neoscona oaxacensis: – Berman and Levi, 1971: 486, figs. 78–90, ♀, ♂.

Diagnosis. the median light band of the abdomen has lobed margins (Fig. 23), and the palpus an S-shaped conductor (Fig. 24). The second tibia of the male has a field of short setae (Fig. 25).

Variation. Specimens from the Galapagos Islands are among the largest ones in collections and females have a slightly shorter epigynum. Males have the edge of the terminal apophysis concave,

more like that of *N. moreli* (Fig. 20). Smaller males have fewer leg setae than large specimens.

Note. Figure 22 was made from a female from Yucatan, Mexico, Figure 23 from Galapagos and Figure 24 from California, Figure 25 from a large male from Galapagos.

Natural History. Collections came from a Honduran sorghum field, buildings and herbs from northern Colombia, and from vegetation in salty ditch with Australian pine (*Casuarina*), S of Lima, Peru.

Distribution. Kansas and California south to Venezuela and Peru. Very common in California and Mexico.

New records. WEST INDIES Curaçao: Willemstad (AMNH). HONDURAS 37 km E Tegucigalpa (AD). NICARAGUA Isla de Ometepe (JMM); León (JMM); Volcán Mombacho (JMM). COSTA RICA *San José:* San José (AMNH). *Guanacaste:* Palo Verde (AMNH, MCZ), Cañas (MCZ). VENEZUELA *Sucre:* Cumaná (MCN). COLOMBIA *Magdalena:* Gaira (MCZ), Punta de Betin, Santa Marta (SMF). *Atlantico:* Barranquilla (JAK). *César:* Valledupar (AMNH). *Antioquia:* Mutatá (MCZ). *Valle:* Lago Calima (MCZ). ECUADOR Galapagos Isl., common (MCZ). *Manabi:* Bahía de Caráquez (AMNH). PERU ?*Tumbes:* Negritas [?Negrita] (CAS). *Lima:* 40 km S Lima (MCZ).

Overlooked species and synonymies

Alpaida O. P.-Cambridge

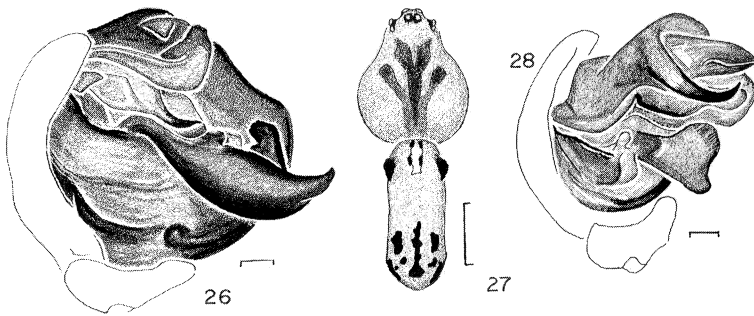
Alpaida O. P.-Cambridge, 1889: 52. Type species by monotypy *A. conica*.

Pickardiana Mello-Leitão, 1943: 192. Type species by monotypy *Epeira truncata* Keyserling, 1865 (= *Alpaida truncata*). NEW SYNONYMY.

Alpaida tullgreni (Caporiacco)

Figures 26, 27

Parawixia tullgreni Caporiacco, 1955: 348, fig. 31, ♂. Male holotype from Rancho Grande, Aragua, Venezuela, in MUCC, examined. Placed in the genus *Alpaida* first by Levi, 1992: 8.



Figures 26, 27. *Alpaida tullgreni*, male. 26, left palpus. 27, dorsal.
 Figure 28. *Aculepeira aculifera*, male palpus.
 Scale lines 12 mm; genitalia 0.1 mm.

Note: This species was overlooked when I revised *Alpaida* and was not illustrated in the paper on the genus *Parawixia* (Levi, 1992).

Description. Male holotype. Carapace brown, with eyes on black spots, and with branched darker brown mark. Sternum brown with large central black spot. Legs brown. Abdomen in poor condition, with black and white patches (Fig. 27), venter black with a pair of white marks. Posterior median and lateral eyes 0.8 diameter of anterior medians. Anterior median eyes 1.3 diameters apart, 2 from laterals. Posterior median eyes slightly more than 1 diameter apart, slightly more than 2 from laterals. Ocular quadrangle as long as wide behind, wider in front. No hook on first coxa. The second tibia short and not modified. Articular membrane of first femur and patella extending on venter of femur to one quarter its length. Abdomen longer than wide with anterior humps (Fig. 27). Palpus with one patellar seta. Total length 4.0 mm. Carapace 2.1 mm long, 1.7 wide. First femur 2.2 mm, patella and tibia 2.6, metatarsus 1.4, tarsus 0.7. Second patella and tibia 2.0 mm, third 1.4, fourth 2.1.

The illustrations were made in 1971 from the holotype.

Diagnosis. The male is probably close to *Alpaida almada* Levi, but differs by the branched pattern on the carapace, by the marks

on the abdomen (Fig. 27), and the shape of the large median apophysis of the palpus (Fig. 26).

Aculepeira aculifera (O. P.-Cambridge)

Figure 28

Epeira helveola O. P.-Cambridge, 1889: 24, pl. 5, figs 1, 2, ♀, ♂.

Female and male syntypes from Ciudad México, Mexico in BMNH no. 1905.4.28.3164-3165, examined. NEW SYNONYMY.

Epeira aculifera O. P.-Cambridge, 1889: 29, pl. 7, fig. 3, ♀.

Female holotype from southern slope of Volcán de Fuego, Guatemala, in BMNH, examined.

Aculepeira aculifera: – Levi 1991a: 304, figs. 566–577.

Synonymy. The male was temporarily placed in *Metazygia* because of the median apophysis lacking spines and flagella (Fig. 28) and the palpal patella having only one macroseta. Reexamining the specimens when revising *Metazygia* I noticed that the posterior median eyes face forward and to the sides as in *Aculepeira* species and very differently from those of *Metazygia*. The female is *Aculepeira aculifera*: the female epigynum is similar to that illustrated by figures 574 and 575 (Levi, 1991a). The male and female seem to belong together: it appears that in the male syntype one palpal patellar seta of the two is broken off and that both flagella of both left and right median apophyses are broken. The name *aculifera* can be kept for the species since page priority does not apply.

Description. Male syntype of *Epeira helveola*. Color as in female. Dorsum of abdomen with similar folium, venter with a pair of white spots near spinnerets. Posterior median eyes same diameter as anterior medians, laterals 0.8 diameter. Anterior median eyes 1.1 diameters apart. Posterior median eyes 1.1 diameters apart. Ocular quadrangle slightly narrower behind than in front. Height of clypeus equals one diameter of anterior median eye. Endite with tooth, palpal femur with facing tubercle. Palpal patella with one macroseta (second may be broken off). First coxa with minute hook. Second tibia thicker than first. Abdomen ovoid. Total length 4.5 mm. Carapace 2.5 mm long, 2.0 wide, behind lateral eyes 0.9 wide. First femur 2.9 mm, patella and tibia 3.6, metatarsus 2.5, tarsus 0.9. Second patella and tibia 3.0 mm, third 1.4, fourth 2.3

Diagnosis. The male has a much smaller conductor (behind prong in Fig. 28) than that of *A. packardi* (Thorell) (Levi, 1977, figs. 159–160) and differently shaped median apophysis with a lobe below the “fish-tail” (Fig. 28) than that of *A. packardi* or *A. callaria* (Levi 1991a, fig. 565).

CORRECTIONS

The revision of the Neotropical *Araneus* (Levi, 1991a) unfortunately had several misprints. Most important is a misprint of the key on p. 186.

67(66) Epigynum with large round bordered opening in ventral or posterior view (figs. 100, 102, 113)	68
Epigynum otherwise	70 (not 69)
68(67) Openings ventral on each side of scape (fig. 113)	69 (not 70)
Openings posterior on each side (figs. 100, 102); Amazon (map 2)	<i>horizonte</i>
69(68) Openings touching scape (fig. 113); median plate narrowing ventrally in posterior view (fig. 114); Venezuela, Brazil (map 2)	<i>bandelierii</i>
Openings not touching scape (fig. 168); median plate wide in posterior view (fig. 169); Peru to northern Chile.....	<i>koepckeorum</i>
70(67) Length of scape about twice that of base (figs. 272, 276, 279)	71

On p. 204 and 302 (Levi, 1991a) the word Records, rather than the word Paratype, should be the indented heading, the same also in Levi (1991b) p. 402, line 1.

On p. 298 (Levi, 1991a), second column, couplet 4(3), read *vitata* not *lisei*.

The holotype of *Aculepeira machu* (p. 302) is now in the MUSM, not USNM; the same for the holotype of *Wagneriana silvae* (Levi, 1991b, p. 409).

Larinia Simon

Harrod, Levi and Leibensperger, 1991, was actually published in February 1991, not 1990. *Drexelia scribe* Mello-Leitão, 1940

from Colatina, Espirito Santo, Brazil in MNRJ is not lost; it was examined and illustrated earlier as *Alpaida scribe* (Mello-Leitão).

SUMMARY

Neoscona marcanoi n. sp. is described from Hispaniola. There are new illustrations for the 4 Neotropical species and a new key and records for the South American species of *Neoscona*. *Alpaida tullgreni* from Venezuela and the male *Aculepeira aculifera* are illustrated. There is a correction for the key to Neotropical *Ara-neus* species.

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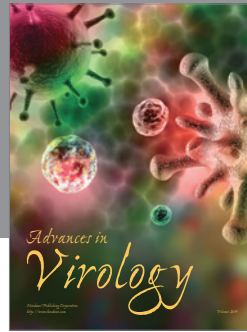
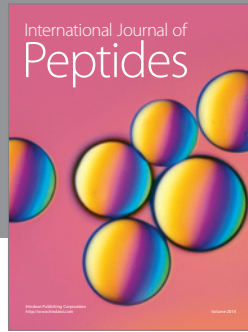
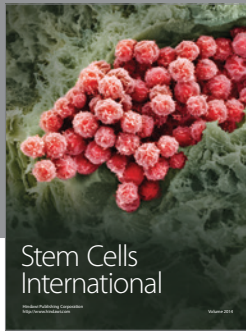
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