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New species of the Madagascan genus *Hovops* Benoit, 1968 (Araneae: Selenopidae), with a description of the *H. madagascariensis* male and an identification key

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ABSTRACT

Hovops Benoit is a heterogeneous genus of selenopid spiders represented by six known species endemic to Madagascar. After examining sizeable collections of Selenopidae from the Afrotropical Region especially, from Madagascar, we here propose new diagnostic characters for *Hovops* and describe three new species: *H. betsileo* sp. n. (both sexes) from Toamasina Province, *H. lidiae* sp. n. (both sexes) from Fianarantsoa Province, and *H. merina* sp. n. (female only) from Antananarivo Province. The male of *H. madagascariensis* (Vinson) is described for the first time, and new records of this species are also provided. An identification key to the species in this genus is proposed.

KEY WORDS: Selenopidae, *Hovops*, *H. madagascariensis*, Afrotropical, Madagascar, taxonomy, identification key, new species.

RESUMEN

Hovops Benoit es un género heterogéneo de arañas selenópidas representado hasta la fecha por unas seis especies conocidas y endémicas de Madagascar. Después de revisar una gran cantidad de material de Selenopidae de la región Afrotropical y, en especial de Madagascar, nos permite proponer nuevos caracteres diagnósticos para este género y describir tres nuevas especies para la ciencia: *H. betsileo* sp. n. (ambos sexos) de la provincia Toamasina, *H. lidiae* sp. n. (ambos sexos) de la provincia Fianarantsoa y *H. merina* sp. n. (sólo la hembra) para la provincia Antananarivo. El macho de *H. madagascariensis* (Vinson) es descripto por primera vez y también se aportan nuevos registros de distribución para esta especie. Se propone una clave para la identificación de las especies del género.

PALABRAS CLAVES: Selenopidae, *Hovops*, *H. madagascariensis*, Afrotropical, Madagascar, taxonomía, clave para las especies, nuevas especies.

INTRODUCTION

The Madagascan selenopid fauna promises to be very diverse. After the end of the 19th century, following the original documentation of species from the island, little new information was gathered for a long period, but in recent years there has been a considerable increase in the knowledge of these spiders, represented by new records of known species, descriptions of new living and fossil species, and nomenclatural and taxonomical changes including the description of a new genus in the family (Corronca 1998*a*, 2002, 2003, 2005; Bosselaers 2004; Penney *et al.* 2005). To date, all the valid Selenopidae genera except *Siamspinops* Dankittipakul & Corronca, 2009 have been recorded for Madagascar, including the following species: *Anyphops benoiti* Corronca, 1998; *Garcorops madagascar* Corronca, 2003; *G. paulyi* Corronca, 2003; *G. jadis* Bosselaers, 2004 (fossil); *Selenops ivohibe* Corronca, 2005; *S. vigilans* Pocock, 1898; and the six endemic species of *Hovops*. This last genus was proposed by Benoit (1968) when he made a taxonomic rearrangement of all known Afrotropical selenopids, to include an endemic species group of Malagasy selenopid species called the "Species Group C" of *Selenops* by Simon (1897). This species group was represented by *S. pusillus* Simon,

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S. legrasi Simon, and *S. modestus* Lenz. The characters considered diagnostic by Benoit (1968) correspond to those described by Simon (1897) for his species group, with some modifications. The species included by Benoit in his genus were: *Hovops pusillus* (Simon, 1887) (type species) (male and female); *H. dufouri* (Vinson, 1863) (female); *H. legrasi* (Simon, 1887) (male and female); *H. madagascariensis* (Vinson, 1863) (female); *H. mariensis* (Strand, 1908) (female) and *H. modestus* (Lenz, 1886) (male). The inclusion of *H. dufouri* in this genus was possibly a mistake, because the name of this species had been considered a junior synonym of *S. radiatus* by Simon (1881).

Many aspects of the biology of the genus and species, and details of the genitalia of the males and the females of these spiders, have been unknown until now. The opportunity to revise material obtained by large collections made in the last 20 years on Madagascar by American and European arachnologists permits us to enlarge the diagnosis of this genus, to propose an identification key to the species of *Hovops*, and to describe three new species and the male of *H. madagascariensis* for the first time.

MATERIAL AND METHODS

Specimens used in this study were provided by the following institutions, whose curators are thanked: CASC – California Academy of Sciences, San Francisco, USA (Dr C. Griswold) and MRAC – Museé Royale de l'Afrique Centrale, Tervuren, Belgium (Dr R. Jocqué). The palps of the males and the epigynes of the females were dissected in alcohol and cleared in lactic acid (90 %) for 15–20 min in a double boiler. The format of the abbreviations, the spine formulae and the terminology used to describe the male and female genitalia follow those proposed by Corronca (1998*b*). All measurements are in millimetres. The specimens were examined, and outstanding characters were photographed, through a Nikon Coolpix S10 digital camera mounted on an Olympus stereomicroscope and assembled using Adobe Photoshop CS2 software.

Abbreviations used are as follows: ALE – anterior lateral eyes, ALS – anterior lateral spinneret, AME – anterior median eyes, AMS – major ampullate spigots, BCC – basal cymbial concavity, C – conductor, CD – copulatory duct, CO – copulatory openings, d – dorsal, DCS – dorsal cymbial scopulae, E – embolus, EP – secondary epigynal pockets, FD – fertilization duct, Fe – femur, LL – lateral lobe, MA – median apophysis, MF – middle field of epigyne, Mt – metatarsus, Pat+Tib – Patella+Tibia, PLE – posterior lateral eyes, PLS – posterior lateral spinneret, PMA – paramedian apophysis, PME – posterior median eyes, PMS – posterior median spinneret, pr – prolateral, rt – retrolateral, RTA – retrolateral tibial apophysis, S – spermathecae, Ta – tarsus, Tib – tibia, v – ventral, VTA – ventral tibial apophysis.

TAXONOMY

Family Selenopidae Simon, 1897
Genus *Hovops* Benoit, 1968

Type species: *Selenops pusillus* Simon, 1887.

Diagnosis: The revision of a considerable number of specimens of this genus makes it possible for us to add new diagnostic characters to those already proposed by Benoit (1968). This genus can be distinguished from other selenopids by the presence of iridescent rounded or sub-triangular scale-like hairs covering the entire body below short

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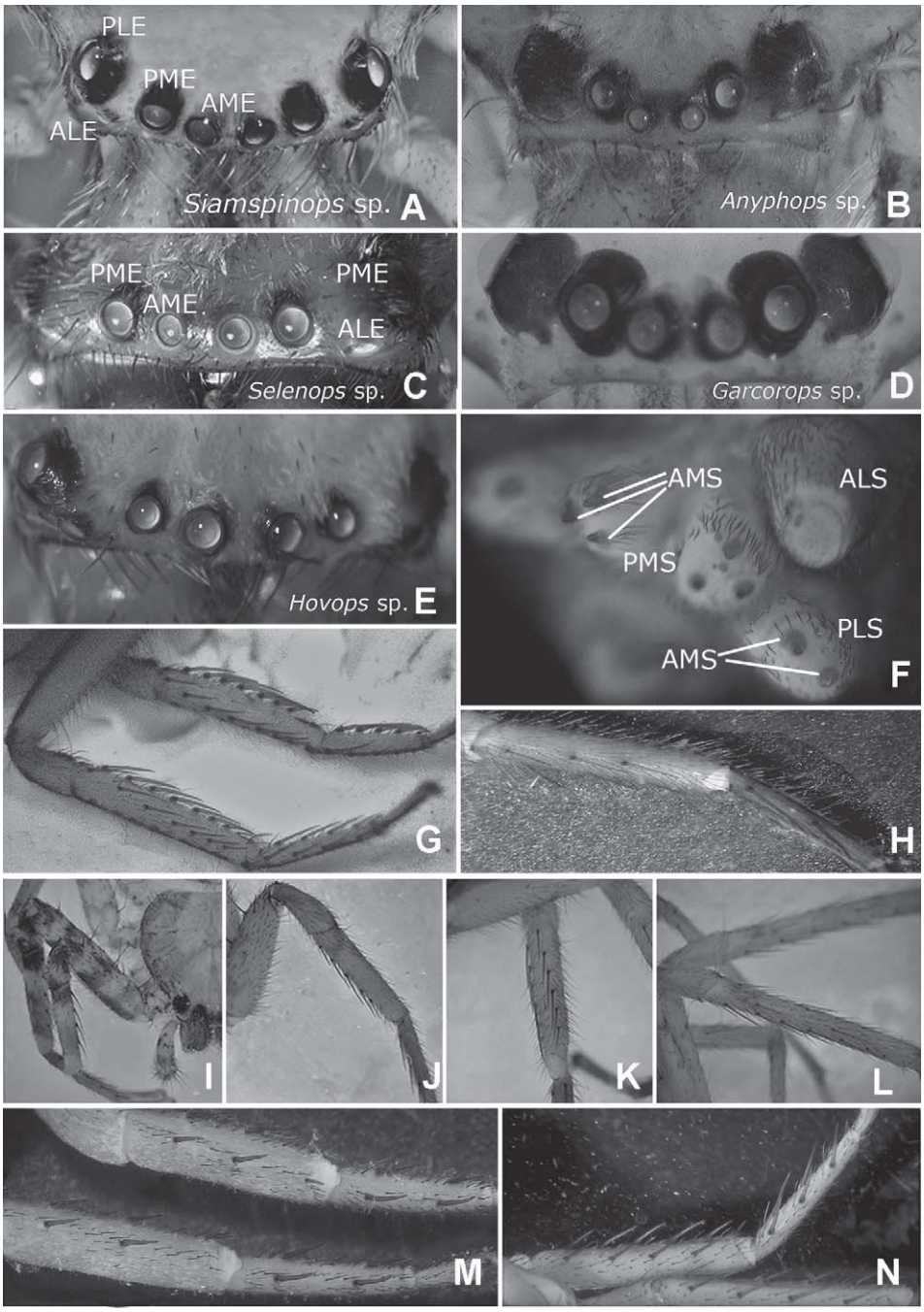


Fig. 1. Comparison of some somatic characters between genera of Selenopidae: (A–E) position and sizes of eyes of (A) *Siamspinops*, (B) *Anyphops*, (C) *Selenops*, (D) *Garcorops*, (E) *Hovops*; (F) details of the major ampullate spigots in *Hovops*; (G–N) number and position of ventral spines on anterior tibia and metatarsi in (G) *Siamspinops*, (H) *Selenops*, (I) *Garcorops* and few species of *Anyphops*, (J–L) other *Anyphops*, (M–N) *Hovops*.

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setae; prosoma wider than long; AME>PME to nearly double in some species (Fig. 1E); ALE similar or larger than PME; PLE almost 1.5× larger than the AME and sternum longer than wide, not circular (Fig. 2C). Fe I–III with d1.1.0 spines, tibiae and metatarsi with ventral spines that can be paired or not. When paired, with Tib I–II with v2.2.2 or v2.2.1 and Mt I–II with v2.2.0 (Fig. 1M); when unpaired, Tib I-II with 9 (4 proventral and 5 retroventral), 10 (4-6) or 11 (4-7) ventral spines (Fig. 1N), and Mt I-II with v2.2.2, in few cases v2.2.0 paired spines. Males usually with more spines than females. Second pair of legs longer than fourth; first usually shortest. Chelicerae with 3 or 4 prolateral and 2–4 retrolateral teeth on cheliceral furrow, uncommonly 3 or 2 teeth. Palp of male with a large and twisted (Fig. 2G), or short and curved, sclerotized RTA (Figs 3B, 4C); embolus long and slender; broad, thickly sclerotized and hyper-developed sickle-shaped conductor, with sharp or hooked terminal ends, and single and large MA, surrounded by broad-based PMA (Figs 2H, 3D, 4D). Epigyne of female with MF as a plate (Fig. 2E), in some cases as a shallow mesial depression (Fig. 4E), with distinct and usually cordiform-shaped lateral lobes, broadly separated (Figs 2E, 4E) or near to posterior midline (Figs 3F, 5D); epigyne with shallow secondary epigynal pockets (Fig. 2E) and complex spermathecae. Posterior median spinnerets with three major ampullate spigots and posterior lateral spinnerets with two (Fig. 1F).

Comparison: *Hovops* can be distinguished from other genera of Selenopidae by the presence of iridescent scale-like hairs covering the entire body (Fig. 5C); the presence of AME>PME (Figs 1A–E); the particular formula of the spines on the femur, anterior tibiae and metatarsi (Figs 1G–N); the oval sternum (Fig. 2C); and the number of major ampullate spigots on the spinnerets.

The males of *Hovops* share with those of *Selenops*, *Garcorops* and *Siamspinops* the presence of a long and filiform embolus covering almost one turn of the bulb, but differ from them by the shape of the conductor and the MA (Figs 2H, 3B, 4D). The presence of a PMA (Fig. 2H) is shared with some species of *Anyphops* and *Garcorops*, but in *Hovops* this is smaller, sub-circular, high and sclerotized. The presence of a well-developed dorsal cymbial scopulae (Fig. 2G) is shared with some species of *Anyphops*, while the presence of a basal cymbial concavity (Fig. 2H) is observed not only in that genus, but also in *Garcorops*.

The general shape of the female epigyne, usually as a medial sclerite with distinguishable lateral lobes, is shared with *Selenops* females, and some species of *Garcorops* and *Anyphops*. The presence of secondary epigynal pockets (Fig. 2E) is a character that also appears in females of *Siamspinops* and *Selenops*, but in *Hovops* they are generally in the middle portion of the epigyne as in *Siamspinops*. The presence of anterior copulatory openings (Fig. 2E) is shared with *Garcorops*, and some species of *Selenops* and *Anyphops*, but the shape of the long, wide and usually well developed copulatory ducts (Fig. 2F) is characteristic of *Hovops* females.

Hovops betsileo sp. n.

Fig. 2

Etymology: The specific name is dedicated to the Betsileo ethnic group living in the high mountains of Madagascar, the third largest ethnic group in numbers. The term means “those who are not overcome”.

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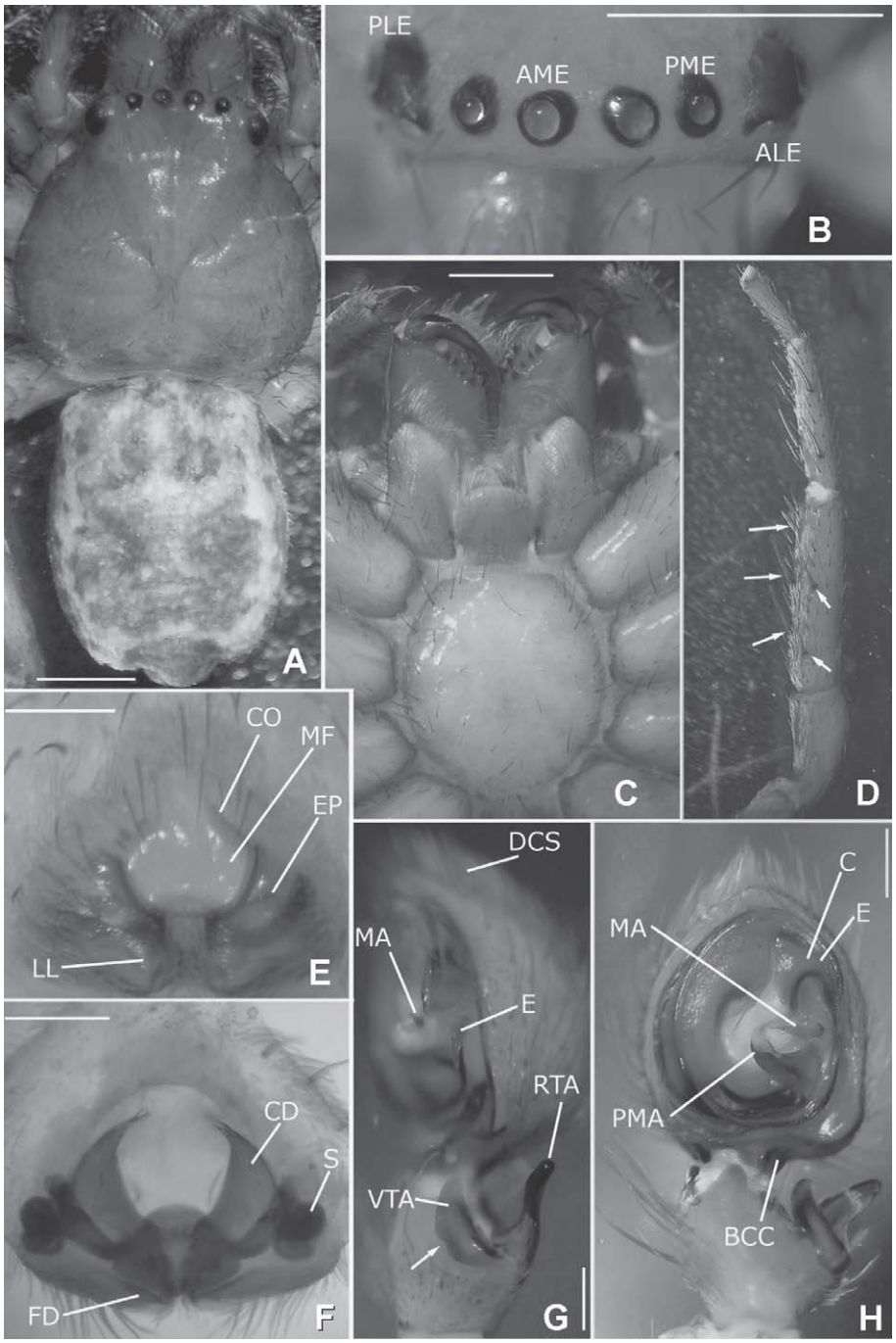


Fig. 2. *Hovops betsileo* sp. n.: (A) female habitus, dorsal view; (B) eyes arrangement; (C) female, ventral view of the prosoma; (D) female, spination of the anterior tibia and metatarsus; (E) female, epigyne ventral view; (F) female, vulva dorsal view; (G) male, palp retrolateral view; (H) male, palp ventral view. Scale bars: A–C = 1 mm; E–H = 0.2 mm.

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Diagnosis: *H. betsileo* sp. n. differs from its congeners by the particular shape of the sigmoid RTA (Figs 2G, 2H), and the VTA with a notch in the middle of the ventral border (Fig. 2G). AM (Fig. 2H) similar to that of *H. lidiae* sp. n. (Fig. 3B), but in the latter species it is more rounded and shorter than in *H. betsileo* sp. n. Females are distinguished by the shape of the middle field (Fig. 2E), the wide separation and the shape of the lateral lobes of the epigyne (Fig. 2F).

Description:

Male.

Total body length 5.00. Prosoma 2.49 long, 2.93 wide. Opisthosoma 2.51 long, 1.89 wide. Eye diameter and interdistances: AME 0.14, ALE 0.11, PME 0.11, PLE 0.23, AME–AME 0.20, AME–ALE 0.39, AME–PME 0.14, PME–PME 0.73, PME–PLE 0.32, PLE–PLE 1.47, ALE–ALE 1.22. Leg formula: 2314. Leg measurements: I – Fe 3.40, Pat+Tib 4.60, Mt 2.90, Ta 1.30, total 12.20; II – 4.30, 5.50, 3.60, 1.60, total 15.00; III – 4.10, 4.40, 2.90, 1.30, total 12.70; IV – 3.40, 4.10, 2.90, 1.30, total 11.70. Leg spination: Fe I d1.1.0, rt1.1.0, II d1.1.0, pr1.1.0, rt1.1.0, III d1.1.0, rt1.1.0, IV d1.1.0; Tib I v1.1.0.0, II–IV no spines; Mt I–IV no spines. Prosoma pale yellow-brown with long scaly hairs. Opisthosoma and legs yellow-brown. Dorsal portion of opisthosoma pale grey with colour pattern (Fig. 2A), flanks and terminal portion whitish with overlapping scale-like hairs accompanied by a few short and dark setae, more numerous over prosoma. Cheliceral furrow with 4.4 teeth on right chelicerae and 3.3 on left. Palp as in Figs 2G, 2H.

Female.

Total body length 6.57. Prosoma 3.40 long, 3.49 wide. Opisthosoma 3.53 long, 2.58 wide. Eye diameter and interdistances: AME 0.12, ALE 0.10, PME 0.10, PLE 0.20, AME–AME 0.16, AME–ALE 0.43, AME–PME 0.15, PME–PME 0.73, PME–PLE 0.38, PLE–PLE 1.48, ALE–ALE 1.32. Leg formula: 2?341. Leg measurements: I – Fe 3.00, Pat+Tib 3.80, Mt 1.80, Ta 0.90, total 9.50; II – missing, III – 3.40, 3.90, 2.10, 0.90, total 10.30, IV – 3.40, 3.80, 2.10, 0.90, total 10.20. Leg spination: Fe I pr1.0.0, d1.1.0, II missing, III–IV d1.1.0; Tib I v2.2.1 (Fig. 2D), II missing, III–IV v1.0.0; Mt I v2.2.0, II missing, III–IV no spines. Prosoma light reddish brown, legs and opisthosoma pale yellow-brown. Body covered with feathery and scale-like hairs with abundant short setae over prosoma and legs, less abundant over opisthosoma. Chelicera furrow with 4.4 teeth (Fig. 2C). Habitus (Fig. 2A), some somatic characters (Figs 2B–D), and epigyne and vulva as in Figs 2E, 2F.

Holotype: ♂ MADAGASCAR: *Toamasina Prov*.: Foulpointe, forêt sur argile, tamisage litiere, 7.xii.1993, A. Pauly (MRAC 200.451).

Paratype: ♀ same data as holotype (MRAC 200.203).

Distribution: Known only from the type locality.

Hovops lidiae sp. n.

Fig. 3

Etymology: The specific name is dedicated to Lidia, the mother of the second author.

Diagnosis: Females of *H. lidiae* sp. n. can be confused with females of *H. merina* sp. n., but differ by the shape of the middle field of the epigyne (Fig. 3F), which is sub-circular

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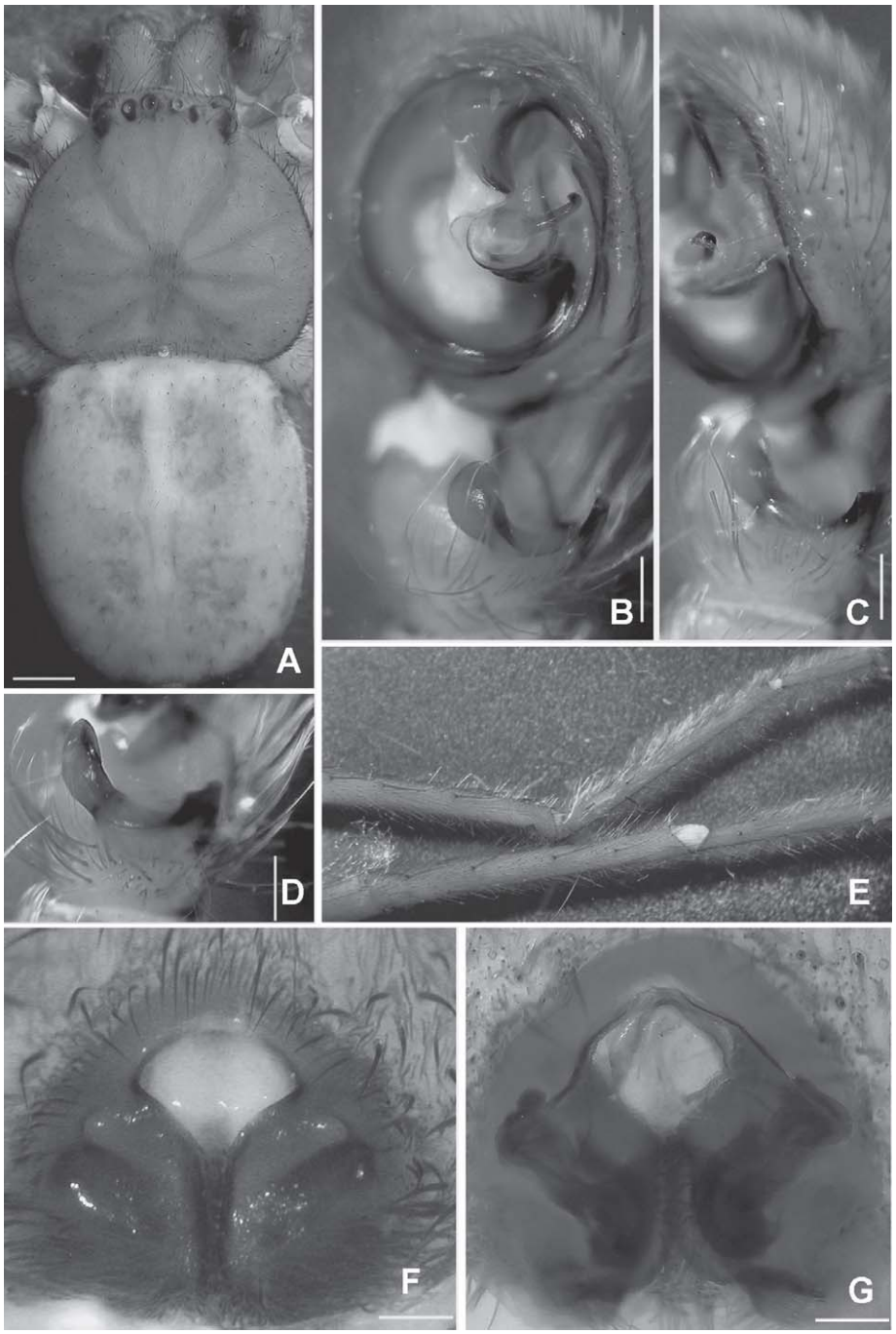


Fig. 3. *Hovops lidiae* sp. n.: (A) female habitus, dorsal view; (B) male, palp ventral view; (C) male, palp lateral view; (D) male, detail of the tibial apophysis; (E) male, spination on the anterior tibia and metatarsi; (F) female, epigyne ventral view; (G) female, vulva dorsal view. Scale bars: A = 1 mm; B–D & F, G = 0.2 mm.

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in *H. merina* sp. n. (Fig. 5D). On the other hand, the shape of the copulatory ducts is more or less similar in its tracks, but their first portion is different (Fig. 3G). The copulatory ducts turn over the head of the spermatheca, leaving one portion without cover (Fig. 3G), in contrast to what occurs in *H. merina* sp. n. (Fig. 5E).

Description:

Male (holotype).

Total body length 7.53. Prosoma 3.82 long, 4.51 wide. Opisthosoma 3.71 long, 2.81 wide. Eye diameter and interdistances: AME 0.21, ALE 0.15, PME 0.16, PLE 0.26, AME–AME 0.32, AME–ALE 0.50, AME–PME 0.09, PME–PME 0.85, PME–PLE 0.45, PLE–PLE 2.06, ALE–ALE 1.72. Leg formula: 2413. Leg measurements: I – Fe 6.50, Pat+Tib 8.60, Mt 6.10, Ta 2.30, total 23.50, II – 7.80, 9.50, 6.70, 2.20, total 26.20; III – 7.20, 8.40, 5.70, 2.10, 23.40 total, IV – 7.40, 8.20, 6.20, 2.10, total 23.90. Leg spination: Fe I d1.1.0, pr1.0.0, II d1.1.0, rt1.1.0, III–IV d1.1.0; Tib I v2.2.2.1.1, rt1.0.0, II v2.2.2.2 (Fig. 3E), rt1.0.0, III v2.2.0; Mt II–III v1.0.0; Tib IV and Mt I & IV no spines. Prosoma pale red-brown with long, light, feathery hairs, and sparse small scale-like hairs. Legs pale yellow-brown. Opisthosoma yellow with light and undifferentiated grey pattern (Fig. 3A), with overlapping scale-like hairs accompanied by few and short setae. Chelicera furrow with 3.3 teeth on right chelicera, and 3.4 on the left. Some somatic characters and palp as in Figs 3B–E.

Female (paratype).

Total body length 9.09. Prosoma 4.20 long, 4.88 wide. Opisthosoma 4.89 long, 2.73 wide. Eye diameter and interdistances: AME 0.21, ALE 0.18, PME 0.17, PLE 0.22, AME–AME 0.29, AME–ALE 0.64, AME–PME 0.16, PME–PME 0.99, PME–PLE 0.65, PLE–PLE 2.43, ALE–ALE 2.02. Leg formula: 2431. Leg measurements: I – Fe 4.70, Pat+Tib 5.80, Mt 3.40, Ta 1.40, total 15.30, II – 5.20, 6.40, 3.70, 1.50, total 16.80; III – 5.10, 5.80, 3.50, 1.50, 15.90 total, IV – 5.20, 5.80, 3.50, 1.60, total 16.10. Leg spination: Fe I vd1.1.0, pr1.1.0, II–IV d1.1.0; Tib I–II v2.2.1, III v1.1.0, IV no spines; Mt I–II v2.2.0, III v1.1.0 (prolateral row) v0.0.0 (retrolateral row), IV no spines. Colour and other somatic characters similar to those of male. Cheliceral furrow with 3.2 teeth. Habitus, epigyne and vulva as in Figs 3A, 3F, 3G.

Holotype: ♂ MADAGASCAR: *Fianarantsoa Prov.*: Talatakely, 21°14.9'S:47°25.6'E, 19–30.iv.1998, N. Penny, C. Griswold, D. Kavanaugh, M. Raherilalao, J. Ranorianarisoa, J. Schweikert & D. Ubick (CASC).

Paratypes: 2♂ 1♀ 2 immatures, same data as holotype (CASC).

Other material examined: MADAGASCAR: *Fianarantsoa Prov.*: 1♂ Ranomafana N.P., 21°12'S:47°27'E, v.1992, V. & B. Roth, S. Kariko (CASC); 1♂ Talatakely, 21°14.9'S:47°25.6'E, at night, 19–30.iv.1998, C. Griswold *et al*. (CASC).

Remark: The male holotype corresponds to the largest specimens of the type series.

Hovops madagascariensis (Vinson, 1863)

Fig. 4

Selenops madagascariensis: Vinson 1863: 303, pl. 3, fig. 3. (Type locality: Madagascar. Type material deposited in Museum of Lübeck, Germany, lost.)
Hovops madagascariensis: Benoit 1968: 117.

Diagnosis: Males of *H. madagascariensis* are distinguished from other species by the particular shape of the RTA (Fig. 4C), the short AM with wider base (Fig. 4D), and the

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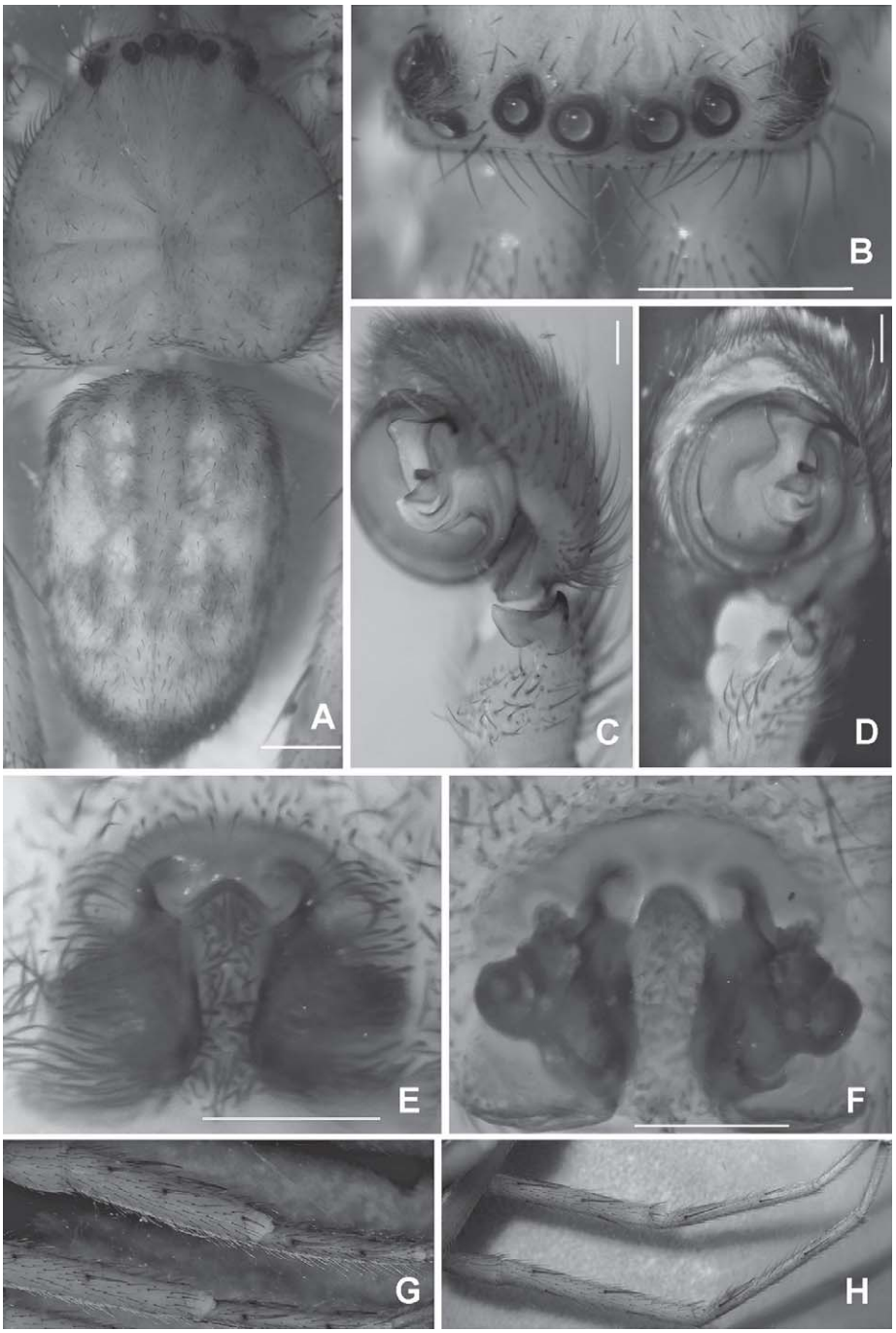


Fig. 4. *Hovops madagascariensis*: (A) female habitus, dorsal view; (B) female, eyes arrangement; (C) male, palp ventro-retrolateral view; (D) male, palp ventral view; (E) female, epigyne ventral view; (F) female, vulva dorsal view; (G) female, spination on the anterior tibiae and metatarsi; (H) male, spination on the anterior tibia and metatarsi. Scale bars: A, B = 1 mm, C–F = 0.2 mm.

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end of the conductor very sclerotized, pointed and curved (Figs 4C, 4D). Females are characterized by the shape of the epigyne, with widely separated lateral lobes in the anterior portion (Fig. 4E), and the middle field of the epigyne being a smooth cavity; the anterior copulatory openings; and the complex and multilobulated spermathecae (Fig. 4F).

Description:

Male (MRAC 208.445).

Total body length 13.41. Prosoma 5.71 long, 6.26 wide. Opisthosoma 7.70 long, 4.73 wide. Eye diameter and interdistances: AME 0.25, ALE 0.21, PME 0.20, PLE 0.34, AME–AME 0.37, AME–ALE 0.79, AME–PME 0.19, PME–PME 1.21, PME–PLE 0.73, PLE–PLE 2.93, ALE–ALE 2.45. Leg formula: 2431. Leg measurements: I – Fe 6.90, Pat+Tib 9.50, Mt 6.50, Ta 2.40, total 25.30, II – 8.50, 10.40, 7.50, 2.50 total 28.90; III – 8.20, 9.80, 6.70, 2.20, 26.90 total, IV – 8.20, 9.70, 7.30, 2.30, total 27.50. Leg spination: Fe I d1.1.0, pr1.0.0, rt1.1.1, II d1.1.1, pr1.1.1, rt1.1.1, III d1.1.1, pr1.1.0, rt1.1.1, IV d1.1.0, pr1.1.0, rt1.1.1; Tib I–II d0.1.0, v2.2.2, rt1.1.0, III pr1.1.0, v2.2.2, rt1.1.0, IV pr1.1.0, v2.2.0, rt1.1.0; Mt I d1.0.0, v2.2.0, rt1.0.0, II pr1.0.0, v2.2.0, rt1.0.0, III pr1.0.0, v2.2.0, rt1.0.0, IV v2.1.0, rt1.0.0. Prosoma reddish brown, legs brown, opisthosoma yellowish brown with a central colour pattern with dorsal grey lines on the flanks. Cheliceral furrow with 3.3 teeth. Palp and tibia and metatarsal spination as in Figs 4C, 4D & 4H.

Female. Was described by Vinson (1863) as "a very common species found in Madagascar, especially in human dwellings in Tananarive". Habitus, some somatic characters and the epigyne and vulva as in Figs 4A, 4B & 4E–G.

Variation: Some male specimens show a lighter colour pattern that is repeated in the sclerotization of the bulb and tibial apophysis.

Material examined: MADAGASCAR: *Antananarivo Prov.*: 1♂ Duke House-Manakambihiny, 17.iii.1992, B. Roth & S. J. Karikó (CASC); 2♂ 2♀ Réserve Spéciale d'Ambohitantely, Forét d'Ambohitantely, 18°13'S: 47°17'E, 20.9 km 72° NE d'Ankazobe, 1410 m, 17–22.iv.2001, montane rainforest, J.J. Rafanomezantsoa *et al*. (CASC-JJR152); 5♀ 34 immatures, 3 km 41° NE Ambohimanga, 18°44'S:47°34'E, 1400 m, 1.xi.1993, J. Coddington, J. Scharff, S. Larcher, C. Griswold, R. Andriamasimanana (CASC); 1♀ Manjakatompo, 12.iii.1994, high forest, A. Pauly (MRAC 201.721); 1♀ Manjakatompo, 12.iv.1995, R. Jocqué (MRAC 201.813); 1♂ 1♀ subadult, Ambatolampy, x.1998, R. Van Esbroeck (MRAC 208.445 & 208.448). *Fianarantsoa Prov.*: 4♂ 2♀ 2 immatures, Parc Nationale Ranomafana, Talatakely, 21°14'S:47°25'E, 19–30.iv.1998, N. Penny, C. Griswold, D. Kavanaugh, M. Raherilalao, J. Ranorianarisoa, J. Schweikert & D. Ubick (CASC); 1♂ Talatakely, 21°14'S:47°25'E, iv.1992, V. Roth (CASC).

Distribution: Antananarivo and Fianarantsoa provinces.

Note: In the examined material, we found females that match the description and drawings proposed by Vinson (1863) for this species together with males that here are described as the male of *H. madagascariensis*.

Hovops merina sp. n.

Fig. 5

Etymology: The species name is dedicated to the Merina ("people of the highlands") of Antananarivo.

Diagnosis: Females of *H. merina* sp. n. differ from the other females of the genus by the particular shape of the middle field, the lateral lobes, the secondary epigynal pockets (Fig. 5D), and the vulva (Fig. 5E).

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Description:

Female.

Total body length 13.24. Prosoma 5.34 long, 5.93 wide. Opisthosoma 7.90 long, 7.50 wide. Eye diameter and interdistances: AME 0.23, ALE 0.22, PME 0.18, PLE 0.31, AME–AME 0.34, AME–ALE 0.79, AME–PME 0.23, PME–PME 1.21, PME–PLE 0.80, PLE–PLE 2.98, ALE–ALE 2.46. Leg formula: 2431. Leg measurements: I – Fe 5.20, Pat+Tib 6.80, Mt 3.60, Ta 1.30, total 16.90, II – 6.00, 7.40, 3.80, 1.30, total 18.50, III – 5.30, 6.60, 3.80, 1.30, total 17.00, IV – 6.00, 6.60, 3.80, 1.40, total 17.80. Leg spination: Fe I d1.1.0, pr1.1.0, II–IV d1.1.0; Tib I v2.2.1, II v2.2.0, III v1.2.0, IV no spines; Mt I–II v2.2.0, III v2.0.0, IV no spines. Prosoma reddish brown with scale-like and feathery hairs, as on legs. Legs pale red-brown, opisthosoma yellow-brown with poorly-defined central grey pattern (Fig. 5A), abundant overlapping scale-like hairs mixed with short and dark setae covering entire body (Fig. 5C). Cheliceral furrow with 3.2 teeth. Epigyne and vulva as in Figs 5D, 5E.

Male. Unknown.

Holotype: ♀ MADAGASCAR: *Antananarivo Prov*.: 3 km 41° NE Andranomay, 11.5 km 147° SSE Anjozorobe, 18°28'24"S:47°57'36"E, 1300 m, montane rainforest, 5–13.xii.2000, C. Griswold *et al*. (CASC ENT 9004212).

Distribution: Known only from the type locality.

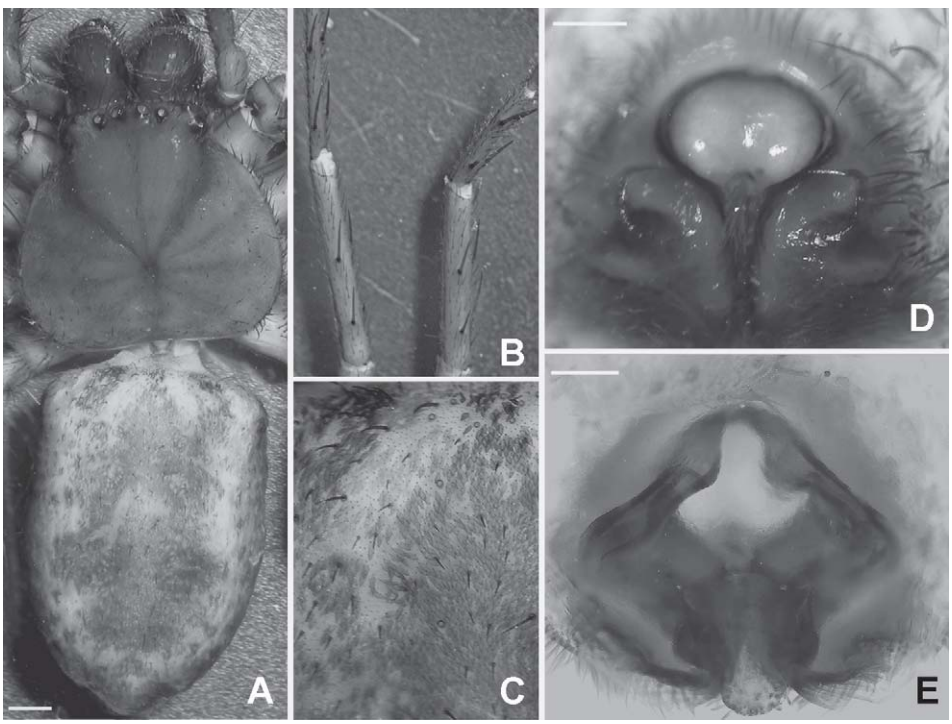


Fig. 5. *Hovops merina* sp. n.: (A) female habitus, dorsal view; (B) female, spination on the anterior tibiae and metatarsi; (C) details of scale-like hairs on opisthosoma; (D) female, epigyne ventral view; (E) female, vulva dorsal view. Scale bars: A = 1 mm; D, E = 0.2 mm.

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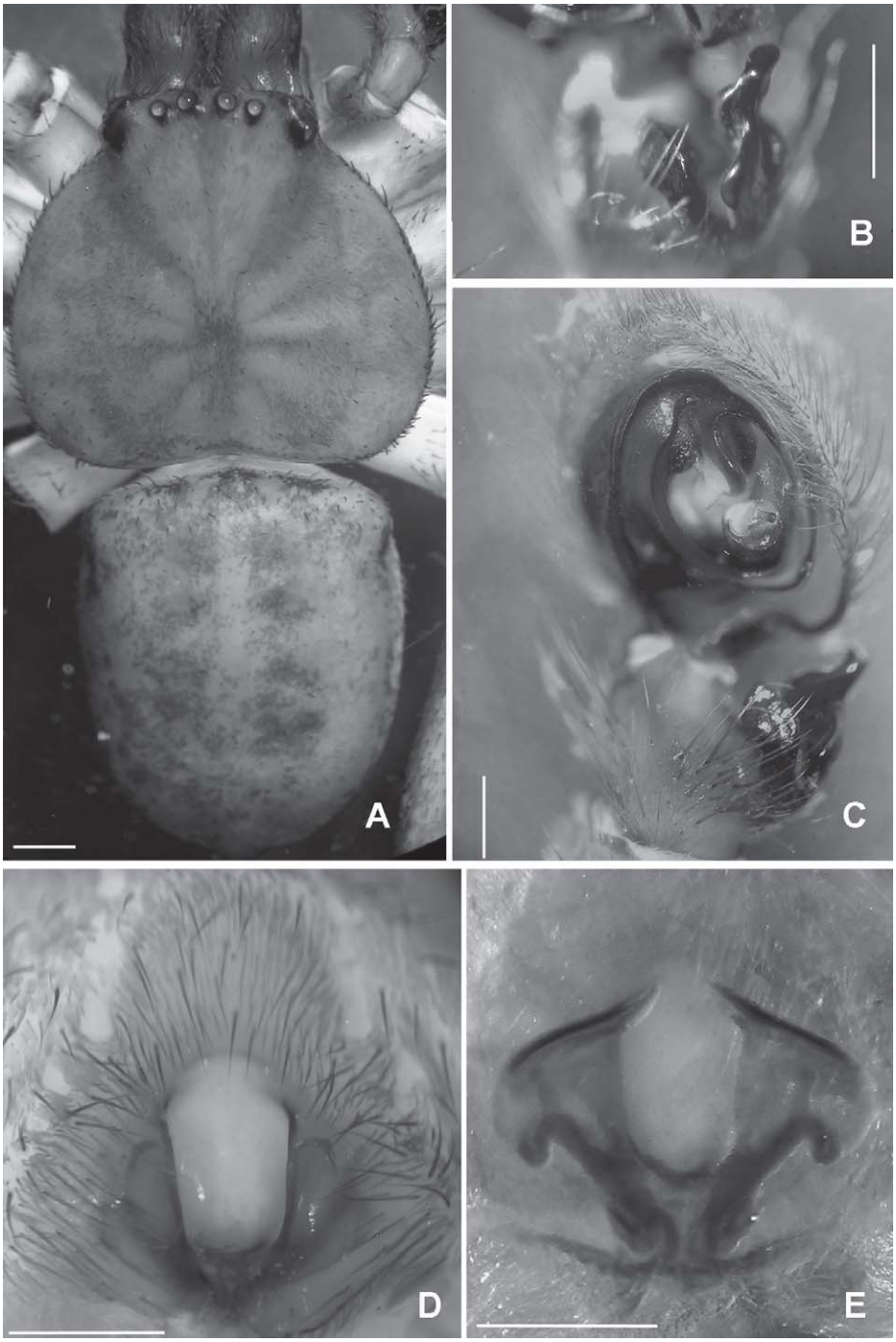


Fig. 6. *Hovops legrasi*: (A) female habitus, dorsal view; (B) male, detail of the tibial apophysis; (C) male, palp ventral view; (D) female, epigyne ventral view; (E) female, vulva dorsal view. Scale bars: A–C = 1 mm, D, E = 0.2 mm.

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Key to species of *Hovops*

Species not included. The type material of *H. modestus* in the Lübeck collection was lost, and it would be a challenge to recognize the specimens of this species only on the basis of the original description and figures. This species is considered here as a *species inquirenda*, not to be included in the identification key. The inclusion of *Selenops dufouri* in *Hovops* was an error. The detailed description and figure of the eye arrangement given by the author of this species (Vinson 1863, pl. III, 1a) show that this species does not belong to the *Hovops* genus, but matches the *Selenops* genus. The type of this species has not been found, so it is presumed lost.

1 Spiders with 6 or fewer ventral spines on tibiae I–II and not more than 4 ventral spines on metatarsi I–II (Fig. 1M) 2
– Spiders with more than 6 ventral spines on tibiae I–II and up to 6 ventral spines on metatarsi I–II (Fig. 1N) 9

2 Males 3
– Females 5

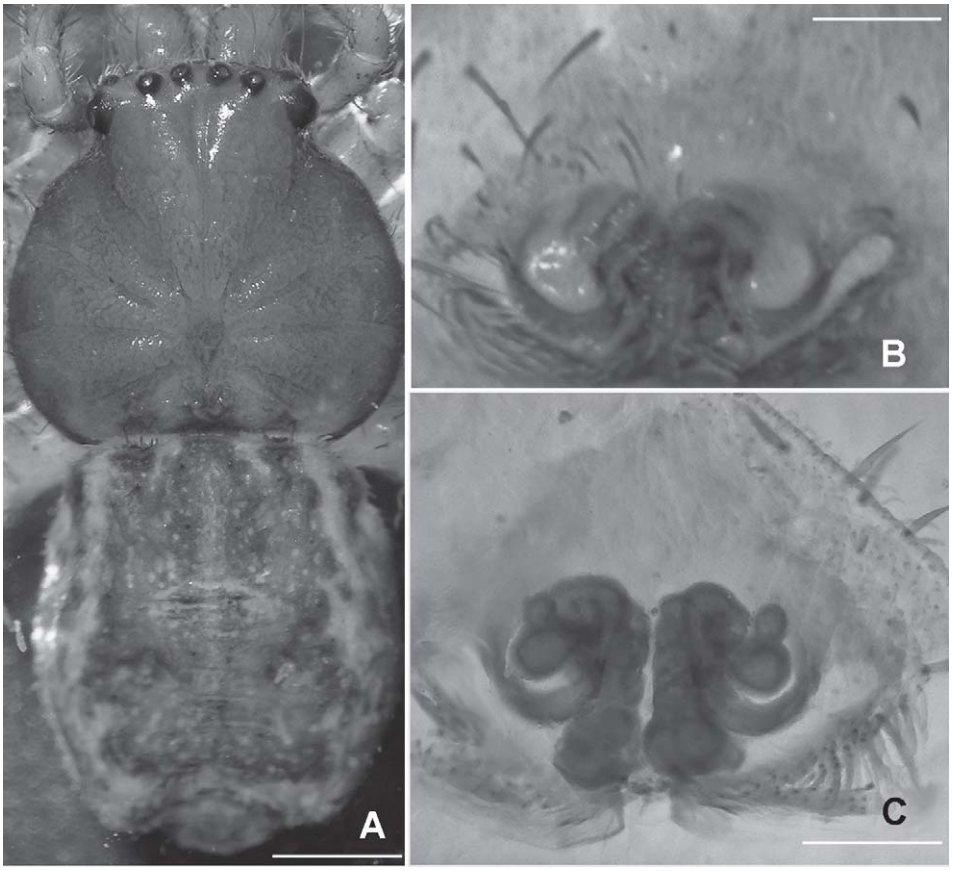


Fig. 7. *Hovops mariensis*: (A) female habitus, dorsal view; (B) female, epigyne ventral view; (C) female, vulva dorsal view. Scale bars: A = 1 mm, B, C = 0.2 mm.

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3 Length of tibia of male palpus less than half length of cymbium (Figs 2H, 8B); RTA well developed, the same length as VTA (Figs 2G, 8B) 4
– Tibia longer than half length of cymbium (Fig. 4C); RTA very short and pointed; VTA short, wide and flattened (Fig. 4C); MA well developed, with wide base, ending in well-sclerotized hook, conductor ending in sharp point (Figs 4C, 4D) ....**madagascariensis** (Vinson)

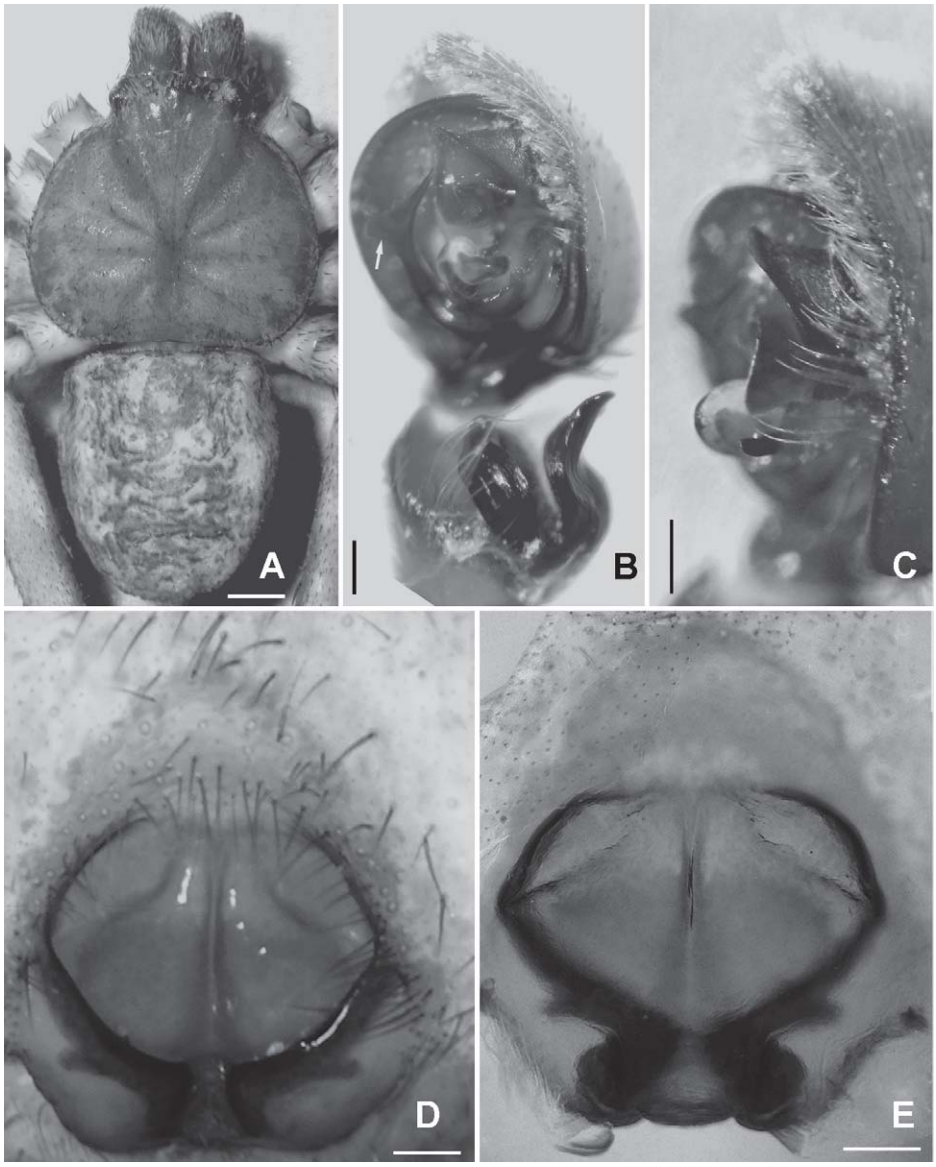


Fig. 8. *Hovops pusillus*: (A) female habitus, dorsal view; (B) male, palp ventro-retrolateral view; (C) male, detail of the bulb, lateral view; (D) female, epigyne ventral view; (E) female, vulva dorsal view. Scale bars: A–C = 1 mm, D, E = 0.2 mm.

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4 Retrolateral tibial apophysis sigmoid, hyper-developed, and very sclerotic (Fig. 8B); VTA wide; embolus turning up almost half of bulb, with external lateral sub-triangular projection (Fig. 8B); conductor divided on end, into sharp branch and rounded branch (Fig. 8C) ..... **pusillus** (Simon)

– Retrolateral tibial apophysis sigmoid, thin, poorly developed (Figs 2G, 2H), VTA flattened, wide, with half-notch lower lobe (Fig. 2G), length of embolus more than half of rotation of bulb, without lateral projection (Fig. 2H); conductor finished in short, just-pointed end (Fig. 2H); MA large; PMA well developed, as crescent (Fig. 2H) ..... **betsileo** sp. n.

5 Epigyne with MF represented by a cavity (Figs 4E, 7B) 6

– Epigyne with MF represented by a sclerite (Figs 2E, 5D, 8D) 7

6 Epigyne sub-triangular (Fig. 7B), CO behind midline of epigyne, widely separated, EP well developed, elongated, postero-lateral (Fig. 7B), long and slender CD going into centre of vulva; multilobulated spermathecae with bilobed head (Fig. 7C) .... **mariensis** (Strand)

– Epigyne sub-quadrangular, CO ahead of epigyne midline and EP developed, sub-circular and in anterior-lateral position (Fig. 4E); short and divergent CD in midline, spermathecae multilobulated with largest number of lobes in middle portion (Fig. 4F) .....**madagascariensis** (Vinson)

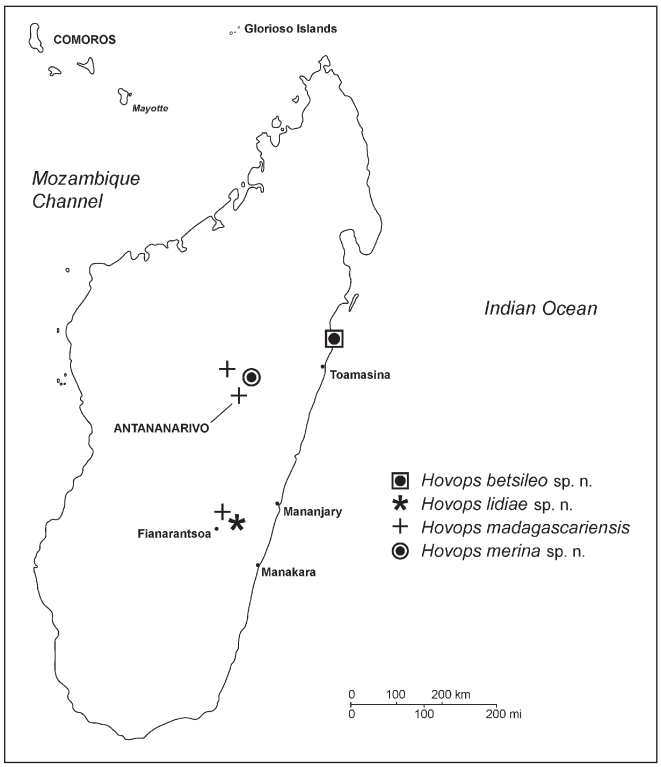


Fig. 9. The distribution of the new species of *Hovops*.

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7 Middle field through small to medium size (Figs 2F, 5D) 8
– Middle field covering almost entire epigyne (Fig. 8D); LL of epigyne cordiform, approaching at midline (Fig. 8D); anterior CO, long and slender CD and small spermathecae in posterior position (Fig. 8E) ..... **pusillus** (Simon)

8 Sub-circular MF (Fig. 5D); EP in midline, and CO near in anterior position (Fig. 5D); CD initially straight, then divergent (Fig. 5E) ..... **merina** sp. n.
– Sub-pentagonal MF (Fig. 2E); EP after midline, with anterior and separated CO (Fig. 2E); CD diverging from beginning (Fig. 2F) ..... **betsileo** sp. n.

9 Males 10
– Females 11

10 Retrolateral and ventral tibial apophysis equal in length (Fig. 6B), RTA hyper-developed, sigmoid, semi-spiral and twisted, VTA with marked ventral keel (Fig. 6B); MA short and sub-triangular (Figs 6B, 6C) ..... **legrasi** (Simon)
– Retrolateral and ventral tibial apophysis unequal in length, with RTA shorter (Figs 3C, 3D); MA long and elongated, tip ending in small hook (Fig. 3B) .... **lidiae** sp. n.

11 Sub-pentagonal MF ahead through midline (Fig. 3F); EP widely separated in midline of epigyne and CO anterior and close together (Figs 3F, 3G) ..... **lidiae** sp. n.
– Sub-hexagonal and elongated MF, through behind midline (Fig. 6D); EP separated in midline and CO separated in anterior position of epigyne (Fig. 6E) .... **legrasi** (Simon)

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