Genus Rogeria

(Key: Kugler, 1994)

Rogeria Emery, 1894:188, type *Rogeria curvipubens*, designation by Wheeler, 1911

Rogeria subgenus *Irogera* Emery, 1915:191, type *Rogeria procera* Emery, by original designation (synonymy by Kempf, 1965)

The genus *Rogeria* was described by Emery (1894) to include ants which were previously placed in the genera *Myrmica* and *Tetramorium*. The genus has a disjunct distribution, with primarily Neotropical species, two species from the southern United States (*R. foreli* and *R. creightoni*), and three from the Pacific region.

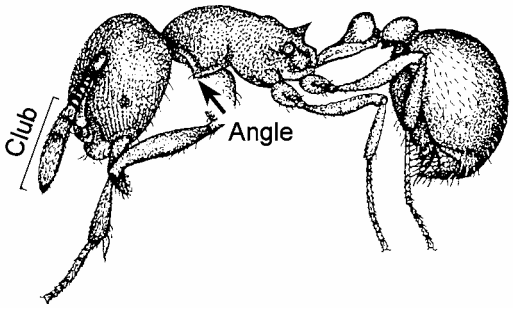


Fig. 1. Side view of a worker of *Rogeria* sp. (from Serna, 1999).

These ants are monomorphic, with 12 segmented antennae. The scape does not reach the posterior lateral corner of the head, and the well defined club has three segments. There are no antennal scrobes. The clypeus generally has two carinulae, which diverge anteriorly. The mandibles have 5 - 7 teeth, not counting tiny denticles which may be present between the teeth. The eyes may have up to 100 ommatidia, and are located anteriorly on the side of the head. The dorsum of the mesosoma is without sutures, the metanotal suture may be present or absent on the side of the mesosoma. The propodeal spines are usually present and can be very well-developed in many of the species. The anterior inferior pronotal angle (Fig. 1) is usually well-developed, and sharp. The heads and mesosomata of all of this species are coarsely sculptured, generally with rugae or at least punctures. The gaster is generally smooth and glossy. Most species are dark reddish-brown to black, often with lighter colored appendages.

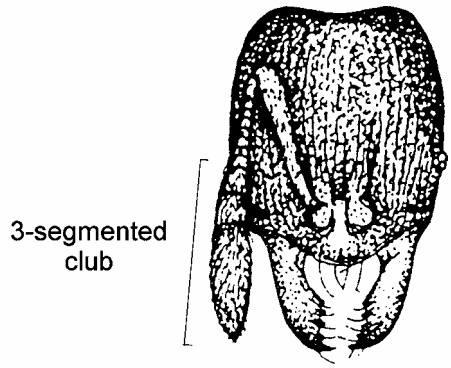


Fig. 2. Head of a worker of *Rogeria* sp. (from Serna, 1999).

This genus could be confused with *Leptothorax*. It differs in that the three segmented club is approximately as long as the remainder of the funiculus (Fig. xx). In addition, most species of *Leptothorax* which overlap with the distribution of *Rogeria*, have more than two longitudinal carinulae on the clypeus, and/or have tiny spines on the petiole, and the postpetiole. It could also be confused with *Tetramorium*. It is relatively easily separated from *Tetramorium*, as it lacks the welt which is found anterior to the insertion of the scape in *Tetramorium*. It also lacks the antennal scrobes, which are well-developed in most species of *Tetramorium*. This character would also

separated from members of the genus *Wasmannia*. Some species of *Stenamma* are similar to those of *Rogeria*, with three segmented antennal club. The apical segment of the club of *Rogeria* is longer than the other two segments, whereas it is shorter in *Stenamma*. The dorsal outline of the mesosoma of *Rogeria* is nearly straight, whereas it is deeply depressed in the metanotal region in *Stenamma*. The anterior inferior pronotal region is broadly rounded in *Stenamma*, whereas it is angulate in all species of *Rogeria*.

The genus has been revised several times (Kempf, 1963, 1964), most recently by Kugler (1994), who recognized 39 species, including 19 new species. Undescribed species are still relatively common, and 4 new species are described in this paper.

These ants are rarely collected, except from litter extractions, where they can be relatively common. Most species nest in the ground, in stumps or logs or in _____.

Key to Workers of *Rogeria* of North America (and northern South America add later???)

1. Hairs on first tergum of gaster appressed to surface (Fig. 3); Southwestern USA south to northern South America; Caribbean …… **2**

- Hairs on first tergum of gaster erect or suberect (Fig. 3); widely distributed … **3**

2(1). Dorsum of pronotum lacking erect hairs, weakly sculptured with poorly defined punctures; Southwestern USA south to northern South America, Caribbean …… **2a**

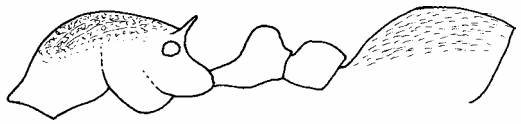


Fig. 3. Side view of a worker of *R. foreli*.

- Dorsum of pronotum with at least a few erect hairs (Fig. 5), covered with coarse, reticulated rugulae; México (San Luis Potosí, Veracruz, Yucatán, Oaxaca, Chiapas), Belize, Guatemala, Honduras, Costa Rica …… ***cuneola*** **Kugler**

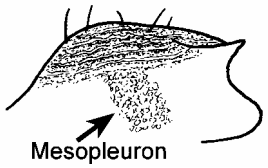


Fig. 4. Side view of the mesosoma of a worker of *R. cuneola*.

2a(). Eye relatively small, with up to 10 ommatidia, located approximately two diameters from anterior margin of head; widely distributed from United States to northern South America, Caribbean …… ……..…….. ***foreli*** **Emery**

- Eye relatively large, with more than 20 ommatidia, located about one maximum diameter from anterior margin of head; known only from central Colombia …. …….. ***termitophila*** **Mackay**

3(1). Propodeal spines absent or developed into small, obtuse angles (Fig. 5) …… **4**

- Propodeal spines usually well developed (Fig. 3), long, if tiny, form definite, slender spines ……. **6**

4(3). Eye relatively large, maximum diameter usually as long as distance between anterior border of eye and anterior border of head (Fig. 5); nearly all hairs on dorsum of gaster completely erect (Fig. 5); Guatemala (Alta Verapaz), Honduras, Costa Rica, Panamá …….. ***inermis*** **Mann**

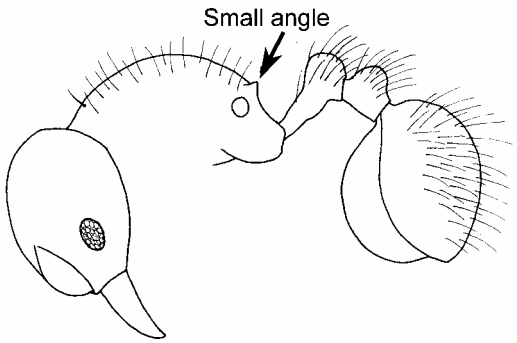


Fig. 5. Side view of a worker of *R. inermis*.

- Eye relatively small, maximum diameter less than ½ distance between eye and anterior border of head (Fig. 6); about ½ of hairs on dorsum of gaster decumbent, or at most suberect (Fig. 6); widely distributed, including southern USA …… **5**

5(4). Propodeal angles completely absent, or forming small angles along longitudinal carina (Fig. 6); México (Chiapas), Costa Rica, Panamá, Colombia, Dominican Republic ……..…….. ***leptonana*** **Kugler**

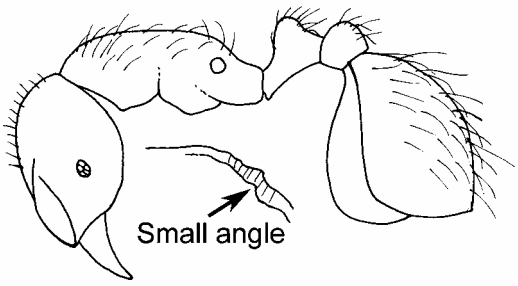


Fig. 6. Side view of a worker of *R. leptonana*. The inset shows relatively well developed pronotal angles.

- Propodeal angles usually developed, united at bases by transverse carina (Fig. 7); Costa Rica (Puntarenas, San José) ……. …… ***neilyensis*** **Kugler**

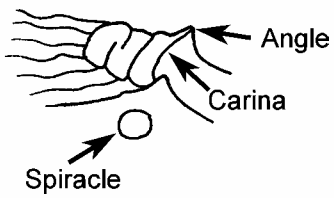


Fig. 7. Propodeum of a worker of *Rogeria neilyensis* (paratype).

6(3). Eye relatively large, maximum diameter about as long as distance between anterior border of eye and anterior border of head (Fig. 8), or smaller and located near anterior edge of head ……..…… **7**

- Eye relatively small, maximum diameter usually less than ½ distance between anterior border and anterior border of head (Fig. 9), or larger and located farther back on head …….…… **11**

7(6). Petiole without defined node (Fig. 8); side of pronotum mostly punctate; Costa Rica (Puntarenas, [Oso Península Sirena]) ……. ***terescandens*** **Kugler**

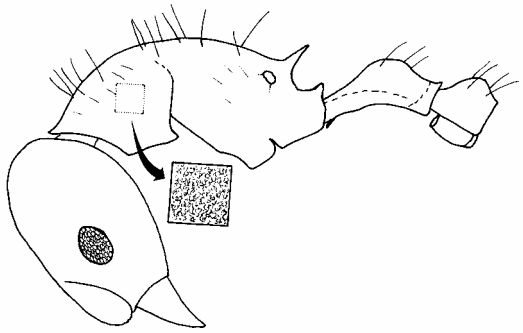


Fig. 8. Side view of a worker of *R. terescandens* (holotype). The inset shows the sculpturing on the side of the pronotum.

- Petiole with defined node (Fig. 9); side of pronotum with striae or rugae ….. **8**

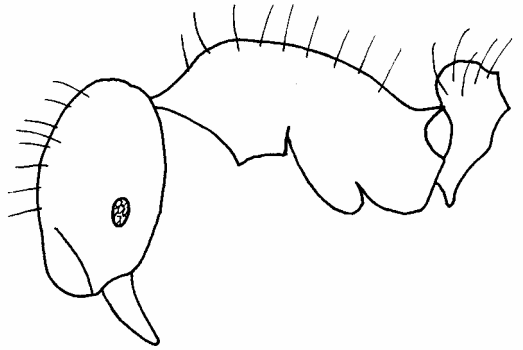


Fig. 9. Side view of a worker of *R. creightoni*.

8(7). Anterior face of petiole forming straight line, from point of attachment, to apex of node (Fig. 11) …. **9**
- Anterior face of petiole forming definite angle between peduncle and node (Fig. 12) …….. **10**
9(8). Erect hairs on dorsum of pronotum mostly curved (Fig. 10); Guatemala, Costa Rica ……..……. ***tonduzi*** **Forel**

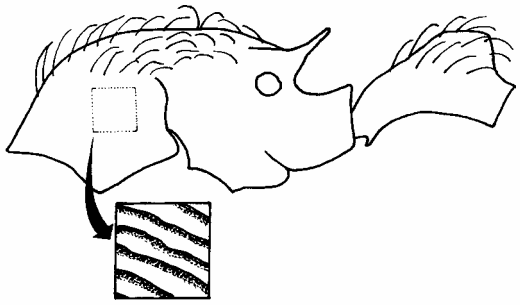


Fig. 10. Side view of a worker of *R. tonduzi*. The inset shows the sculpturing on the side of the pronotum.

- Erect hairs on dorsum of pronotum straight (Fig. 11); Honduras, Costa Rica, Panamá …… ***scandens*** **(Mann)**

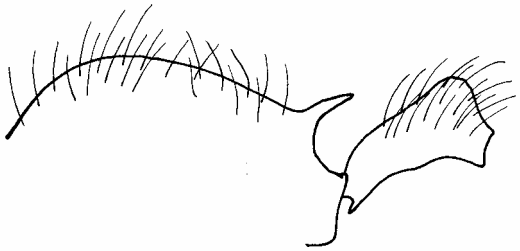


Fig. 11. Side view of a worker of *R. scandens*.

10(8). Antennal scape with several erect hairs (or nearly erect), which are twice length of the suberect hairs (Fig. 12); México (Veracruz, Chiapas), Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panamá, Colombia …….. **10a**

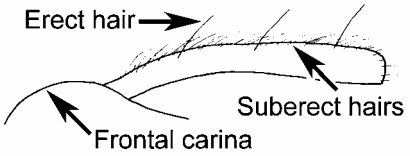


Fig. 12. Right scape of a worker of *Rogeria belti*, as seen obliquely from the top of the head.

- Antennal scape without erect hairs, suberect hairs present (Fig. 13); Panamá, Colombia, Dominican Republic, South America ……..… ***alzatei*** **Kugler**

Fig. 13. Right scape of a worker of *Rogeria alzatei*, as seen obliquely from the top of the head.

10a(). Extensor surface of posterior tibia without erect or suberect hairs; widely distributed …….…… ***belti*** **Mann**
- Extensor surface of posterior tibia with erect and suberect hairs; known only from Nicaragua ……..… ***maesi*** **Mackay**
11(6). Several hairs on antennal scapes suberect (Fig. 14) or erect (Fig. 12) hairs …. ……..….. **12**

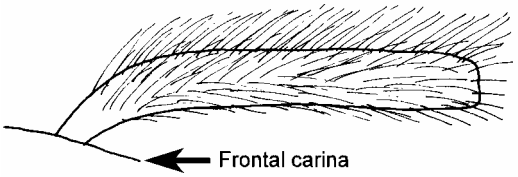


Fig. 14. Right scape of a worker of *Rogeria gibba*, as seen obliquely from the top of the head.

- All hairs on antennal scape appressed or nearly so (Fig. 15) …….. **15**

Fig. 15. Right scape of a worker of *Rogeria curvipubens*, as seen obliquely from the top of the head.

12(11). Dorsum of gaster covered with fine, short (0.1 mm hairs), with recurved tips (Fig. 16); Panamá …….. ***gibba*** **Kugler**

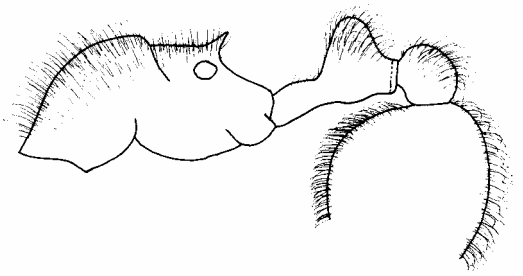


Fig. 16. Side view of a worker of *R. gibba*.

- Dorsum of gaster with scattered, sparse, longer (mostly greater than 0.1 mm), erect hairs, which may be recurved at tips (Fig. 17); dorsum of gaster with fine sculpture, lacking coarse punctures; widely distributed ….. **13**

13(12). Relatively large (total length 3 mm); Costa Rica, Panamá, South America ….. **14**

- Relatively small (total length < 2 millimeters); southern Texas south to Tamaulipas, Veracruz; Oaxaca, Chiapas, Belize, Nicaragua, Costa Rica …… …….. ***creightoni*** **Snelling**

14(12). Many erect hairs on dorsum of ant curled or curved (Fig. 17); dorsum of pronotum areolate; Honduras and Panamá ; South America …… ***blanda*** **(F. Smith)**

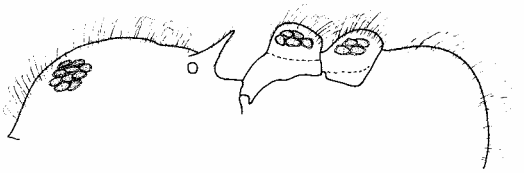


Fig. 17. Side view of a worker of *R. blanda*. The sculpturing is partially shown.

- Nearly all erect hairs straight (Fig. 18); dorsum of pronotum mostly coarsely rugose; México to Colombia ……. **14a**

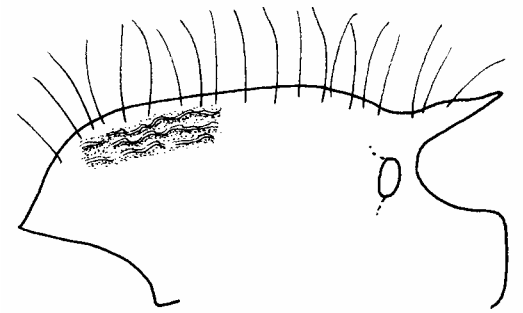


Fig. 18. Side view of the mesosoma of a worker of *R. cornuta*, showing part of the sculpture.

14a(). Hairs on dorsum of head relatively long (0.05 - 0.10), simple, or blunt-tipped; México (Chiapas), Belize, Costa Rica (Guanacaste) ……. ***cornuta*** **Kugler**

Fig. 19. Side view of heads of workers of *R. cornuta* and *R. clavula*.

- Hairs on dorsum of head short (0.03 - 0.04 mm), thick, most nearly spatulate; known only from Colombia ……. …….. ***clavula*** **Mackay**

15(12). Erect hairs scattered over dorsal surface of mesosoma ……..…. **16**

- Erect hairs on mesosoma mostly restricted to pronotal shoulder (Fig. 19); México (Veracruz), Guatemala, Panamá, Colombia, Venezuela ……..…. …….. ***curvipubens*** **Emery**

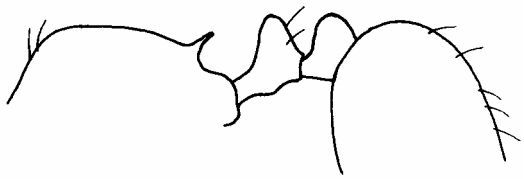


Fig. 20. Side view of a worker of *R. curvipubens*.

16(15). Mesopleuron punctate, with little evidence of striae (Fig. 20), eye tiny, with approximately 6 ommatidia (diameter 0.03 mm); México (San Luis Potosí, Veracruz, Yucatán, Oaxaca, Chiapas), Belize, Guatemala, Honduras, Costa Rica ……. ……..….. ***cuneola*** **Kugler**

- Mesopleuron with striae or rugulae, interspersed with few punctures (Fig. 21); eye with approximately 9 ommatidia (maximum diameter 0.06 mm); México (Chiapas), Nicaragua, Costa Rica, Colombia …….. ***innotabilis*** **Kugler**

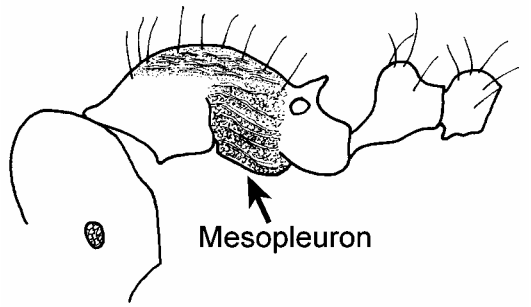


Fig. 21. Side view of a worker of *R. innotabilis* (paratype).

Key to Workers of *Rogeria* of the Caribbean

Blanda, brunnea (creightoni), carinata creightoni), curvipubens, ~~foreli~~, lirata (tonduzi), scobinata

1. Hairs on first tergum of gaster appressed to surface (Fig. 3); Puerto Rico, Saint Croix, Saint Thomas, Trinidad …..…… ***foreli*** **Emery**

- Hairs on dorsum of gaster erect or suberect …….…… **2**

2(1). Eye relatively large, maximum diameter about as long as distance between anterior border of eye and anterior border of head (Fig. 8), or smaller and located near anterior edge of head ……..…… **3**

- Eye relatively small, maximum diameter usually less than ½ distance between anterior border and anterior border of head (Fig. 9), or larger and located farther back on head …… **11**

3(2). **Lirata ***here making key**

11 brunea, carinata, curvipubens

Key to Workers of *Rogeria* of southern South America[1]

Alzatei, bruchi, germaini, lacertosa, pellecta, scobinata, sciaria, subarmata

1.

Rogeria alzatei Kugler

Rogeria alzatei Kugler, 1994:52 - 54, Figs. 58 - 60, 99, worker, female, Panamá, Panamá, Barro Colorado Island

Figs. 13 (scape), 21 (side view); Map 1

Discussion. The workers are small (total length slightly more than 2 millimeters), pale brown to dark brown specimens, with lighter colored appendages. The scape is covered with numerous hairs, which are only slightly

[1] *Rogeria minima*, known only from the gyne (Tucumán, Argentina), is not included in the key. Kugler (1994) compares the gyne to workers of *R. micromma* and *R. cuneola*, which would probably resemble the unknown workers of this species.

raised from the surface. The eyes are usually relatively large (maximum diameter 0.09 mm) with about 16 ommatidia. The maximum diameter of the eye is approximately equal to the distance from the anterior edge of the eye to the anterior edge of the head. The dorsum of the mesosoma is covered with rugae, the sides of the mesosoma, including the mesopleuron, have similar rugae, which are only slightly finer. The propodeal spines are well-developed, slender, elongate (0.1 mm). The petiolar peduncle is well-developed, nearly as long as the height of the node, with a well-developed, subpeduncular tooth. The node of the petiole is rounded. Erect hairs are abundant on most surfaces, including the head, (with two distinct lengths, 0.04 mm, and 0.015 mm, the shorter hairs are somewhat decumbent), on the dorsum of the mesosoma, petiole, postpetiole, and gaster, the hairs on the tibiae are mostly appressed to the surface.

The lack of erect hairs on the scape would distinguish this species from similar species, such as *R. belti* and *R. creightoni*. The relatively large eyes separate it from species such as *R. curvipubens*.

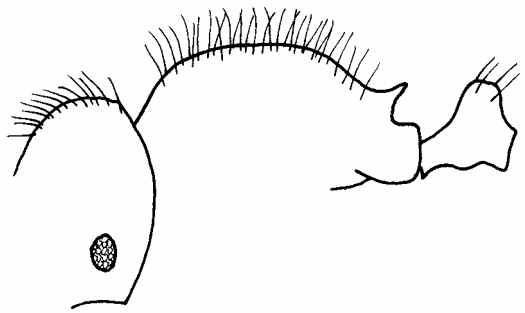
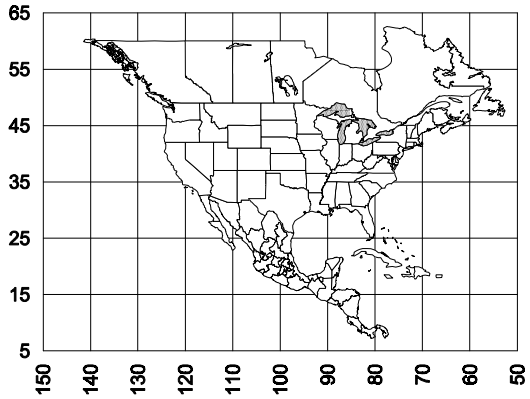


Fig. 22. Side view of a worker of *R. alzatei*.

Distribution. Panamá: Panamá (Barro Colorado Island) _____ 3 k SW Gatún, Bocas del Toro (Cerro Campana 900-950m, #'s 17753, 17754, 17756, 17834, 17833, 17835, 17838, 7 ΔΔ CWEM); Dominican Republic; Colombia: Guajira (Don Diego), Magdalena (San Pedro), Chocó (10 longer SW San José del Palmar, Río Torito, Finca Los Guaduales), Antioquia (Estación Biológica) Cundinamarca (road from Bogotá to Villavicencio), Meta (23 k NW Villavicencio), Guyana, Perú, Brasil, and Paraguay.



Map 1. *Rogeria alzatei.*

Habitat. Wet montane tropical forest.

Biology. Most specimens were collected from leaf litter extractions.

Rogeria belti Mann

Rogeria belti Mann, 1922:31, worker, Honduras, Progresso; Kugler, 1994:60 - 62, Figs. 35 - 39, 91 - 92, worker, female, male,

Figs. 12 (scape), 22 (side view); Map

Discussion. The worker is a relatively large (3 mm total length), medium to dark brown species, with lighter colored appendages. The scape has several erect hairs, (usually 4 or more can be seen, as the scape is viewed obliquely from the top of the head). The

eyes are relatively large (maximum length 0.1 mm), with more than 20 ommatidia, located approximately one maximal diameter from the anterior border of the head. The mesosoma is coarsely rugose, and the propodeal spines are well-developed, slender, and elongated (length 0.15 mm). The petiolar peduncle is well-developed, about as long as the height of the node, with a well-developed ventral tooth. Erect hairs are abundant on most surfaces, including the head, mesosoma, petiole, postpetiole, gaster, the tibiae lack erect or suberect hairs on the extensor surfaces, those on the flexor surfaces are appressed, or distally suberect. ???need fig of tibia Kugler (1994) discusses the very ability in this species, and suggest that it may be a species complex.

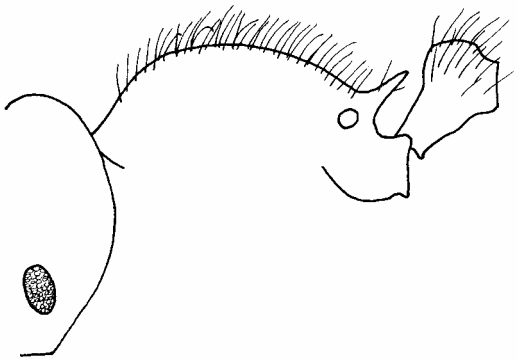
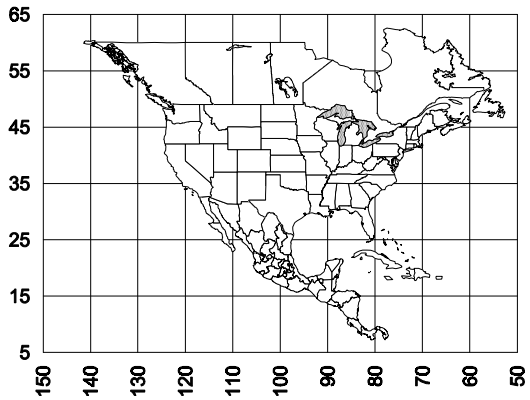


Fig. 23. Side view of a worker of *R. belti*.

This species is very similar to *R. maesi*, differing only in that it has suberect hairs on the extensor surface of the tibiae. It can be separated from similar species, such as *R. cornuta* (and to some extent *R. gibba*) by the large eyes. Some specimens of *R. alzatei* could be confused with this species, but they lack erect hairs on the antennal scape. Workers of *R. creightoni* have smaller eyes (fewer then 15 ommatidia).

Distribution. México: Veracruz (Los Tuxtlas), Chiapas (El Bosque); Guatemala (Bobas); Belize (Caves Branch); Honduras (El Progreso, Lancetilla, La Ceiba); El Salvador (between Apopa and Nejapa); Costa Rica: _____, Miami, Heredia, _____ Santa Clara (Hamburg Farm, Parismina Br.) Puntarenas (Manuel Antonio National Park, Reserva Carara), _____ Corcovado national Park); Panamá: Chiriquí (Chiriquí Mountains, Boquete), _____ Cerro Campana, _____ El Valle, Panamá(Barro Colorado Island); Colombia: Nariño (La Guayacana).



Map 2. *Rogeria belti.*

Habitat. In rain forests, from elevations of 200 - 1500 m.

Biology. Kugler (1994) discusses the few biological notes that are available for this species. Specimens have been collected in philodendron, on frond sheaths on the ground, and leaf litter, around an epiphyte mat on a fallen branch, rotten wood, and in dead trees or branches on the ground. It may nest in logs. They apparently eat dead insects.

Rogeria blanda (F. Smith)

Myrmica blanda F. Smith, 1858:131, worker, Brasil, Amazonas, Ega; Kugler,

1994:37-38, Figs. 17, 83-84, worker, queen, male.

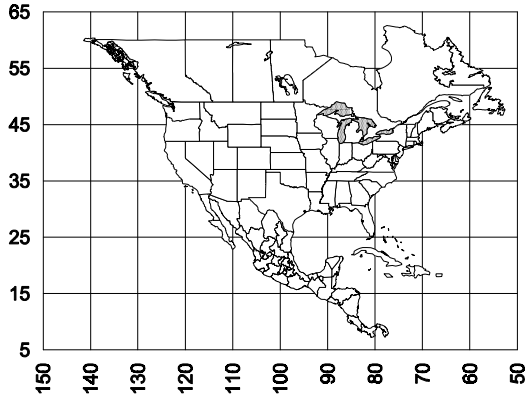
Rogeria foveata Kempf, 1964:64, Figs. 19-20 (Kempf, 1965:185)

Figs. 17 (side view); Map

Discussion. The workers are relatively large (total length > 3 mm) medium reddish brown specimens, with slightly lighter colored appendages. The antennal scape has numerous, long (0.1 mm), erect and suberect hairs, in addition to several shorter hairs (0.05 mm) that are often curled at the tips. The eye is relatively large (maximum diameter 0.13 mm), but is located relatively posteriorly on the head, and separated from the anterior margin of the head by approximately 1 ½ diameters. The eye has approximately 45 ommatidia. The dorsal surface of the head covered in erect hairs (0.08 - 0.12 mm in length), those on the mesosoma, petiole, postpetiole, and gaster are similar, but slightly less dense. The tibiae (as well as the other parts of the legs) are covered in erect hairs, which are often curled. The mesosoma is areolate, with poorly defined rugulae, the propodeal spines are long (0.2 mm) and sharp. The peduncle is elongated, nearly as long as the height the petiole, the subpeduncular tooth is well-developed, and directed anteriorly.

The abundant, erect hairs on nearly all of the body surfaces, would separate this species from most of the others in the genus. It is very similar to *R. cornuta*, differing primarily in having areolate sculpturing on the dorsum of the mesosoma, whereas distinct rugae are present on the mesosoma of *R. cornuta*. It could be confused with *R. gibba*, but differs in that the hairs on the scapes are of two (or various) different lengths; those on the scape of *R. gibba* are all approximately the same length. The propodeal spines are also longer (those of *R. gibba* are approximately 0.1 mm in length). The erect hairs on the dorsum of the gaster of *R. gibba* are much more dense than they are the dorsum of the gaster of *R. blanda*.

Distribution. Costa Rica: Heredia (Puerto Viejo, La Selva Biological Station), Santa Clara (Hamburg Farm), Puntarenas (Corcovado), Panamá: Panamá (Barro Colorado Island), South America from Perú to southern Brasil.



Map 3. *Rogeria blanda.*

Habitat. From lowland tropical forests to disturbed sites, 50 - 1000 m (Kugler, 1994).

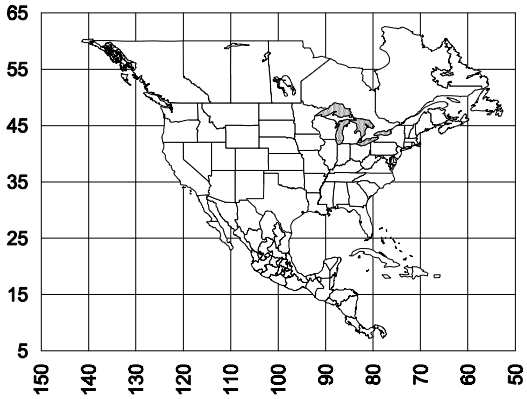
Biology. This species nests in cacao trees in Costa Rica, and in a small, rotten long suspended about 50 cm above the ground in 2 (Kugler, 1994). Specimens from Perú were collected in rotten wood. Workers are occasionally collected from litter extractions.

Rogeria brunnea *xx*

Figs. ; Map

Discussion.

Distribution. Caribbean Islands.



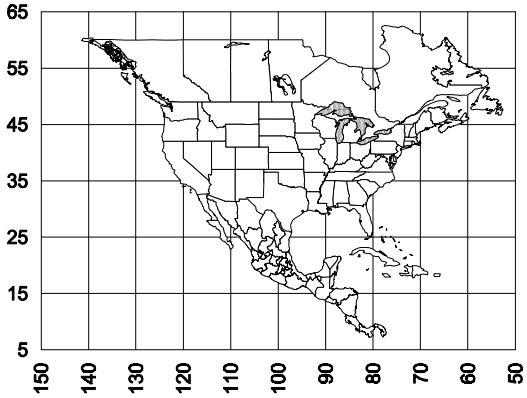
Map 4. *Rogeria brunnea.*

Habitat.
Biology.

Rogeria carinata xx

Figs. ; Map

Discussion.
Distribution. Caribbean Islands.



Map 5. *Rogeria carinata.*

Habitat.
Biology.

Rogeria clavula new species

Figs. ; Map

Discussion. This species can be easily recognized, by the short (those on the dorsum of the head and on the scape mostly less than 0.04 mm, the length of those on the scape are approximately ½ the diameter of the scape, those on the dorsum of the mesosoma range from 0.05 - 0.10 mm), erect, thickened hairs, on the dorsum of the head, and the dorsum of the mesosoma. The hairs on the scapes are similar, but are suberect. It the eye is relatively small, (maximum diameter 0.06 mm) located nearly two diameters from the anterior margin of the head.

This species can be easily separated from all of the other species of *Rogeria*, by the unusual form of the erect hairs. It could only be confused with *R. cornuta*, to which it is apparently closely related, but the hairs on the dorsum of the head, on the scapes, and the dorsum of the mesosoma of *R. cornuta* are relatively long (most over 0.05 mm) and simple. The length of most of the hairs on the scapes of *R. cornuta* are at least one diameter of the scape.

Description.

Worker: HL 0.71, HW 0.60, SL 0.47, EL 0.06, WL 0.76, SpL 0.13, CI 85.

Mandible with 6 teeth; anterior border of clypeus convex, carina with two, anteriorly diverging carinulae; eye small; anterior inferior pronotal angle developed; propodeal spines developed; subpeduncular tooth of petiole developed, with posterior flange, length of peduncle about half height of node; postpetiole and gaster missing.

Erect hairs abundant on entire dorsal surface of head, hairs on scapes suberect, erect hairs on all surfaces of dorsum of mesosoma, and dorsum of petiole, hairs on anterior tibia mostly appressed, on middle and posterior tibiae

suberect on extensor surface, appressed on flexor surface.

Head with longitudinal rugae, transverse and somewhat reticulated on posterior part of head, mesosoma with longitudinal rugae, transverse on dorsal face of propodeum, mesopleuron with rugae, with punctures scattered between them, dorsum of petiole with longitudinal rugae.

Concolorous honey-colored.

Type Series: Holotype worker, COLOMBIA, Bolívar, # 296, Many Reit # 16143 (MCZC).

Etymology: from Latin, *clavula* the diminutive form of *clava*, meaning club, referring to the erect hairs, most of which are thicker at the apex, than near the base.

Distribution. Known only from the type locality of Zambrano, in the state of Bolívar, Colombia.

Habitat. Unknown.

Biology. Unknown.

Rogeria cornuta Kugler

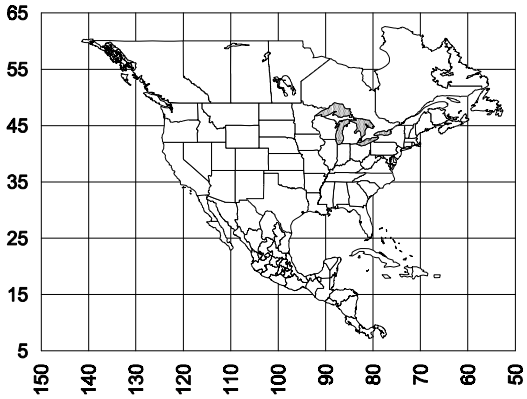
Rogeria cornuta Kugler, 1994:65 - 66, Fig. 45, worker, , Belize, 2.5 mi S Belmopan

Figs. 18 (mesosoma); Map

Discussion. The worker is relatively large (total length over 3 mm), dark brown, with medium brown appendages. The antennal scape has several (6 erect hairs can be seen on the outline of each of the scapes of a paratype worker, with the scape viewed obliquely from the top of the head, additional erect hairs can also be seen from other angles) erect hairs. These erect hairs (0.1 mm) are longer than the abundant subdecumbent hairs (0.05 mm) located on scape. The head, mesosoma, petiole, postpetiole, and gaster have scattered, long (0.08 - 0.2 mm), erect hairs, in addition to a few decumbent or appressed, shorter hairs (0.1 mm), especially noticeable on the dorsum of the gaster. The tibiae (as well as the other parts of the legs) have abundant, suberect hairs. The eye is relatively small (maximum length 0.07 mm), with approximately 18 ommatidia, located about 1½ diameters from the anterior border of the head. The head and the mesosoma, including the mesopleuron, are covered with rugae, the propodeal spines are long (0.3 mm) and sharp. The peduncle of the petiole is elongated, nearly as long as the height of the petiole, the subpetiolar tooth is poorly developed.

The relatively small eyes, and the greatly developed propodeal spines, separate this species from most of the others in the genus *Rogeria*. It could be confused with *R. blanda*, but differs, in that the sculpturing of the mesosoma is mostly rugose, whereas it is areolate, with only very poorly developed rugulae in *R. blanda*. Other similar species, such as *R. innotabilis*, are much smaller, and lack erect hairs on the antennal scape. Compare with creightoni???

Distribution. México: Chiapas (Ocosingo); Belize (2.5 mi S Belmopan) Costa Rica: Guanacaste (Maritza Field Station, 800 mm, numbers 17709, 17716 CWEM), Puntarenas (Fundación Neotrópica - CWEM).



Map 6. *Rogeria cornuta.*

Habitat. Montane hardwood forest.

Biology. Specimens were collected in leaf litter extractions.

Rogeria creightoni Snelling

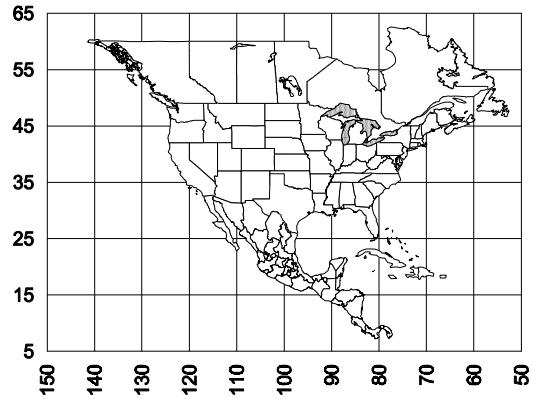
Rogeria creightoni Snelling, 1973:2, worker, Fig. 1, USA, Texas, Cameron Co., La Feria; Kugler, 1994:50 - 51, worker, female

Figs. 9 (side view); Map

Discussion. The workers of *Rogeria creightoni* are small (total length < 2.5 mm), pale brown ants. The antennal scape has several, erect hairs, which is that they are mostly black more numerous erect are longer than the abundant suberect hairs that are also present on the scape.

Kugler (1994) discuss the considerable variability in this species, and suggests that it may actually be a species complex.

Distribution. United States: Texas (Cameron County, Live Oak County); México: Tamaulipas (Antiguo Morelos), Veracruz (Pueblo Nuevo), Oaxaca (1 mi. E Reforma, near Tuxtepec), 9 mi. E El Camarón), Chiapas (12 mi. NW Ocozocoautla), Yucatán (Chichén Itzá), Belize (near Belmopan, Caves Branch); Nicaragua (Izapa Nobarasca, CWEM), Costa Rica: Guanacaste (Loma Barbudal, CWEM) Heredia (La Selva Biological Station), San José (San José, Jurrucarres) south to Panamá (Quelabra Juan Grande, CWEM).



Map 7. *Rogeria creightoni.*

Habitat. Variety of plant communities, ranging from mesquite-acacia savanna to riparian woodland, palm-thorn forest, pine oak forest, Cecropia forest, cacao plantation, to rain forest.

Biology. Most specimens have been collected in extractions in leaf litter. The specimens from Loma Barbudal were collected in a subterranean trap baited with Vienna sausage.

Rogeria cuneola Kugler

Rogeria cuneola Kugler, 1994:68-69, Figs. 77 - 78, 103, worker, female, Mexico, Oaxaca, 1 mi E Reforma, near Tuxtepec; *Rogeria* PA-2, Mackay et al., 1991:261, 265

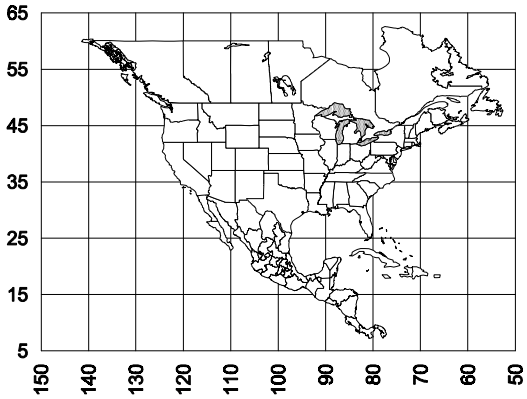
Figs. 4 (mesosoma); Map

Discussion. The worker is a small (total length about 2 mm) pale to medium brown specimen. The antennal scape lacks erect hairs, and the remaining hairs are all appressed to the surface, except for hairs at the apex. The eye is tiny, with about six ommatidia, and a maximum diameter of about 0.03 mm. The maximum diameter is approximately one third of the distance between the anterior border of the eye and the anterior border of the head. The propodeal spines are relatively short (0.05 mm), with the width at the base being approximately equal to the total length of the spine. The peduncle is elongated, the length being approximately equal to the height of the petiole. Erect hairs are sparse, nearly absent on the dorsum of the head, a few hairs may be present on the pronotal shoulder, and near the anterior edge of the propodeum, and are usually absent on the dorsum of the first gastral tergum.

This species would be most easily confused with *R. foreli*, as both species lack erect hairs on the dorsum of the first segment of the gaster (occasionally present in *R. cuneola*). They can be separated, as the dorsum of the mesosoma of *R. cuneola* has definite rugae, which are poorly developed, or absent in *R. foreli*. The dorsum of the mesosoma always has a few erect hairs, in addition to the pair of hairs on the pronotal shoulder, erect hairs are normally absent on the dorsum of the mesosoma of *R. foreli*, except possibly a pair of hairs on the pronotal shoulder. A few very tiny (length approximately 0.01 mm) may be present on the mesosoma of *R. foreli*. The mesosoma of *R. cuneola* is nearly straight, whereas it is swollen and somewhat bulging upwards in *R. foreli*. The ventral surface of the postpetiole of *R. cuneola*, as a anteriorly projecting what edge along the anterior border. This which is missing in *R. foreli*, with the anterior ventral border being perpendicular to long axis of the ant.

Specimens which have erect hairs on the dorsum of the gaster could be confused with *R. curvipubens* or *R. innotabilis*. It can be separated from *R. curvipubens*, as it normally has erect hairs near the anterior edge of propodeum, which are lacking in *C. curvipubens*. It can be separated from *R. innotabilis* by the relatively small eyes, with about six ommatidia (as compared with nine ommatidia in *C. innotabilis*). The mesopleuron of *C. cuneola* has punctures, whereas the mesopleuron of *R. innotabilis* is covered with striae or rugulae, which may be interspersed with the few punctures. The erect hairs on the dorsum of the head are tiny (approximately zero .01 mm), and most are decumbent, they are longer (> 0.02 mm) and nearly completely erect in *R. innotabilis*. Finally, the first tergum of the gaster has few or no erect hairs, they are scattered and relatively abundant in *R. innotabilis*.

Distribution. México (Oaxaca, 1 mi E Reforma, near Tuxtepec; San Luis Potosí, El Salto; Veracruz, Pueblo Nuevo near Tetzonapa, El Palmar near Tetzonapa; Jalisco, 6 k N El Tuito; Chiapas, Palenque, 10 k S Palenque [30-v-1988, W. Mackay # 10567 CWEM]; Yucatán, Uxmal), Belize (Belmopan), Guatemala, Honduras (La Lima, Caves Branch [4-14-viii1972, S. Peck MCZC]), south to Costa Rica (Guanacaste, Santa Rosa National Park, Maritza Field Station [3-v-1995, R. Anderson #'s 17709, 17715, CWEM]; Puntarenas, Manuel Antonio National Park).



Map 8. *Rogeria cuneola.*

Habitat. Tropical evergreen forest, montane hardwood forest, primary or secondary mesic forest, and thorn forest.

Biology. Kugler (1994) summarizes the biology of this species. They are most often collected in leaf litter and rotten wood, and are often associated with termites, and they be collected from siftings under termite mounds. One was collected in a *Cattelya* orchid

Rogeria curvipubens Emery

Rogeria curvipubens Emery, 1894:190, Virgin Islands: Saint Thomas; Kugler, 1994: 66 - 68, Figs. 74 - 76, 101 - 102, worker, female

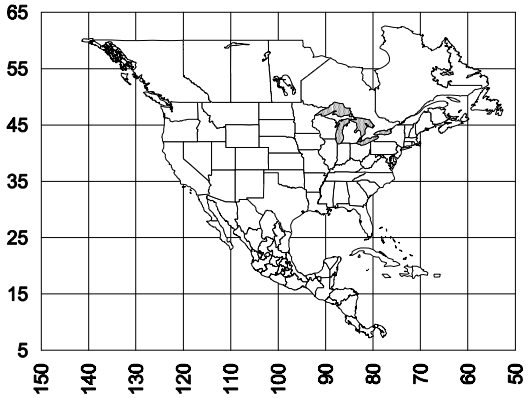
Figs. 15 (scape), 19 (side view); Map

Discussion. The worker is a small (total length 2 mm), pale brown specimen, with tiny eyes (maximum length 0.04 mm), with approximately nine ommatidia, separated from the anterior border of head by a length of about twice the length of the eye. The antennal scape is without erect or even suberect hairs, the numerous hairs are all appressed (except at the apex). The dorsum of the head essentially lacks erect hairs, those on the dorsum of the mesosoma are nearly completely restricted to the pronotal shoulders, where two or three may be present. The posterior face of the petiole has one - four erect, posteriorly directed hairs, the posterior face of the postpetiole has a few hairs, which are nearly appressed, the gaster has a few, suberect hairs, but most hairs are appressed, the tibiae are without erect hairs, a few suberect hairs may be present on the flexor surface near the apex of the tibia. The sculpture is relatively fine, punctate, or granulate, the mesopleuron is completely punctate. The propodeal spines are small (0.05 mm), but are well-developed. The subpeduncular tooth is well-developed, the peduncle is nearly as long as the height of the node, which is broadly rounded, with slightly convex anterior and posterior faces.

Specimens which lack erect hairs on the first tergum could be confused with *R. foreli*. They can be separated, as *R. foreli* also completely lacks erect hairs on the dorsum of the pronotum. It could also be confused with *R. alzatei* and *R. leptonana*, it can be distinguished by the essential lack of erect hairs on the dorsum of the mesonotum and propodeum, which are present and abundant on the latter two species. Separation from *R. cuneola* is more difficult, although at least the mesonotum of *R. cuneola* usually has a few, erect hairs, as does the dorsum of the head. The anterior ventral edge of postpetiole has a wedge-shaped process, which projects almost directly downward, not anteriorly under the petiole, as does in *R. cuneola*.

Compare with *R. alzatei*, *R. leptonana* ***here*

Distribution. México: Veracruz (Cuatatolapan); Guatemala: Alta Verapaz (Trece Aguas), Panamá: Panamá (Barro Colorado Island); Colombia: Guajira (Serrania de Macuira, near Río Don Diego), Magdalena (near Santa Marta, Tayrona National Park), Meta (near Villavicencio); Venezuela; Surinam; St. Thomas; Haiti; St. Croix; Jamaica.



Map 9. *Rogeria curvipubens.*

Habitat. Tropical rain forest, second growth forest, in dry tropical forest, below 500 m in elevation (Kugler, 1994).

Biology. This species is occasionally found in leaf litter extractions (Kugler, 1994).

Rogeria foreli Emery

Rogeria foreli Emery, 1894:191, worker, Virgin Islands: St. Thomas; Kugler, 1994: 71 - 72, Figs. 79 - 82, 104 - 105

Rogeria foreli gaigei Forel, 1914:617 (Kugler, 1994:71)

Rogeria Huachucana Snelling, 1973:4, Fig. 1 (Kugler, 1994:71)

Fig.3 (side view); Map

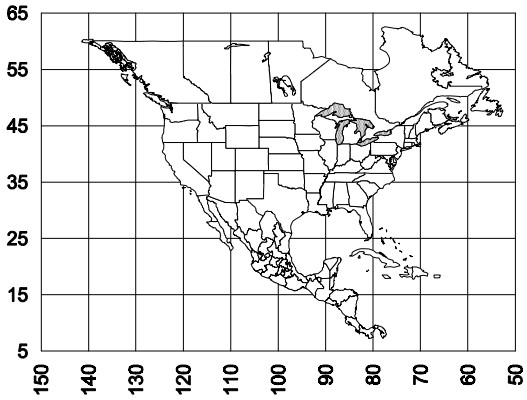
Discussion. This is easily recognized as a small (about 2 mm total length), light and brown species. The eyes are very small (about 8 ommatidia). All of the hairs on the antennal scape are tiny, and closely appressed to the surface, except for a few small hairs at the apex. The propodeal spines are tiny (Lake approximately 0.04 mm the, the width at the base is approximately equal to the length of the spines. Erect hairs are normally absent on the dorsum of the mesosoma, although it pair of hairs occasionally is found on the pronotal shoulders, erect hairs are also absent on the petiole and postpetiole, as well as the first gastral tergum. Appressed, silver hairs in parentheses length 0.03 mm) are abundant on the dorsum of the gaster. The anteroinferior pronotal angle is well developed (Fig. xx), which is nearly as large as the angle on the propodeum.

This species could be easily confused with *R. cuneola*. It is most easily separated by the lack of erect hairs on the dorsum of the mesosoma (a single pair may be present on the pronotal shoulder). A few very tiny (length approximately 0.01 mm) may be present on the mesosoma of *R. foreli*. *Rogeria cuneola* has at least a pair of erect hairs on the pronotal shoulder, as well is a few hairs near the anterior edge of the from propodeum (either on the propodeum or on the mesonotum). The sculpturing on the dorsum of the mesosoma of *R. foreli* is fine, with little evidence of rugulae, whereas the sculpture of *R. cuneola* is coarse, with definite rugulae. The mesosoma of *R. foreli* is swollen and somewhat bulging upwards, whereas it is nearly straight in *R. cuneola*.

Rogeria foreli is closely related to *R. termitophila*. The two species can be easily separated, as the eyes of *R. foreli* are relatively small (approximately six ommatidia) whereas they are much

larger in *R. termitophila* (approximately 15 ommatidia).

Distribution. United States: Southeast Arizona (Cochise Co., Chiricahua Mountains [3 mi NW Portal, W. Mackay, MCZC], and surrounding the eastern desert [CWEM]), New Mexico (Doña Ana Co. 45 k NE Las Cruces, Jornada Long Term Ecological Research Site, CWEM], Nicaragua (Ixapa Nobarasca, 16-vi-1986, J. Palacios, CWEM, Zelaya, Cutcra Hills, 16-ix-1988, J. Palacios CWEM]), Panamá (Barro Colorado Island), Gatún, Ancon, Gamboa [Soberania National Park, 26-v-1995, R. Anderson CWEM]; Colón, Frijoles, Cerro Azul) to northern South America, including Colombia (Magdalena, Guajira), Venezuela (Barinas, Sucre, Aragua [Parque Nacional H. Pittier, Rancho Grande, 19-x-1988, W. Mackay # 11239-3 CWEM]; Puerto Rico, Saint Croix, Saint Thomas and Trinidad.



Map 10. *Rogeria foreli.*

Habitat. In the United States, this species is found in rocky, desert areas within the Chihuahuan Desert, extending into juniper woodland at least to1800m. In Central and South America, it is found in tropical rain forests.

Biology. The habits of this ant are little known. They apparently nest under stones, as that is where stray workers have been found. Workers are occasionally collected when sifting leaf litter. Specimens from Venezuela were collected in traps baited with Vienna sausage. A winged female was collected in May in Panamá.

Rogeria gibba Kugler

Rogeria gibba Kugler, 1994:32-33, Figs. 5 - 6, worker, female, Ecuador, Pichincha, 4 k E Santo Domingo de los Colorados

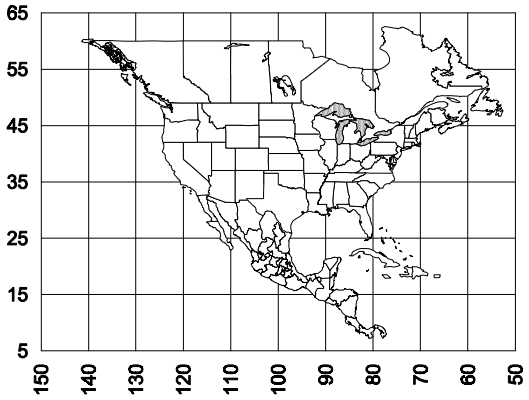
Figs. 14 (scape), 16 (side view); Map

Discussion. The workers of this species are relatively large (total length approximately 3.5 mm), dark reddish-brown ants, with lighter colored appendages. The hairs on the antennal scape are suberect to erect, relatively short (up to 0.07 mm) and all of approximately the same length. The eye is moderate sized (maximum diameter 0.13 mm) with about 16 - 35 ommatidia, located about 1 ⅓ diameters from the anterior border of the head. Nearly all of the surfaces are covered by dense hairs (0.08 mm on dorsum of head, 0.14 mm on pronotum, 0.1 mm on dorsum of gaster) with most hairs curled, especially near the tips. The mesosoma is somewhat hump-backed, with the metanotal region much lower than the posterior edge of the mesonotum. The sculpture is reticulate on the head, mesosoma, petiole and postpetiole, the dorsum of the gaster is smooth and polished.

The abundant, erect hair on nearly all surfaces of the body, especially the gaster, would distinguish this species from all others in North America. It could possibly be confused with *R. blanda*, but the erect hairs are

not nearly as dense as they are in *R. gibba*. This species is very similar to *R. ciliosa* of Venezuela, but can be easily separated, as the dorsum of the gaster of *R. ciliosa* is densely, and coarsely punctate.

Distribution. Panamá (Cerro Campana, 950m, CWEM), Colombia (Antioquia, Chocó), Ecuador (Pichincha, Manabí).



Map 11. *Rogeria gibba.*

Habitat. Wet montane forest.

Biology. All known workers were apparently collected in leaf litter extractions.

Rogeria inermis *Mann*

Rogeria inermis Mann, 1922:32, Fig. 15. worker, Honduras: El Progreso; Kugler, 1994: 62-63, Figs. 40 - 42 worker, female

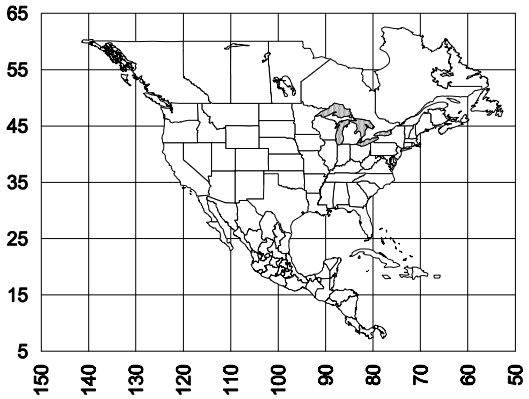
Figs. 5 (side view); Map

Discussion. This is a small (total length < 0.2 mm), yellowish brown species, with the legs being approximately the same color as remainder of the ant. The eye is tiny (with about five ommatidia), with the maximum diameter being about one half the distance between the anterior edge of the eye, and the anterior edge of the head. The scape lacks erect hairs (except at the apex), but obvious hairs are present on the scape, and are slightly raised above the surface. The extensor surfaces of the tibiae also lack erect hairs, although suberect hairs may be present. The dorsum of the head has numerous suberect hairs that are about 0.04 mm in length. The mesosoma is convex, but not swollen (as in *R. foreli*), the sutures are difficult to see. The mesosoma has several erect hairs on the pronotal shoulder, and a few scattered across the dorsum. The propodeal spines are small (0.06 mm), with the base being approximately as wide as the length of the spines. The length of the petiolar peduncle is short, about one half the height of the petiole. The two faces of the petiole converged dorsally to form a rounded node. The first tergum of the gaster is usually without erect hairs. Sculpturing is rough on the head in the mesosoma, consisting of rugulae interspersed with punctures. The petiole and postpetiole are more finely sculptured, and mostly punctate. The dorsum of the gaster is smooth and glossy.

This species could be confused with *R. foreli* and *R. termitophila*. It differs in that the dorsum of the mesosoma is convex, not swollen and inflated, as it is in the other two species. The sculpture on the mesosoma is very coarse, whereas it is fine in the other two species. It could also be confused with *R. innotabilis*. It differs and at the mesopleuron is mostly punctate at, not having rugulae as in *R. innotabilis*. Occasionally, *R. leptonana* and reduced propodeal spines, but have smaller eyes (6- fig ommatidia) compare these 2 ??? also belti

Distribution. Guatemala: Alta Verapaz (Lanquín); Honduras (El Progreso, Lombardia) Costa Rica:

Heredia (Puerto Viejo, La Silva Biological Station), Guanacaste (Maritza Field Station - CWEM), Limón (Cahuita), Puntarenas (Osa Peninsula, Manuel Antonio National Park, Carara biological Reserve, Fundación Neotropical - CWEM) Cartago (near Turrialba); Panamá: Bocas del Toro (Continental divide - CWEM), Panamá (Barro Colorado Island, Panamá City), Gamboa, Chiriquí (La Fortuna - CWEM, 20.4 k N San Félix - CWEM).



Map 12. *Rogeria inermis.*

Habitat.

Biology.

Rogeria innotabilis Kugler

Rogeria innotabilis Kugler, 1994:51 - 52, worker, female (?), Figs. 55 - 57, 97 - 98

Figs. 20 (side view); Map

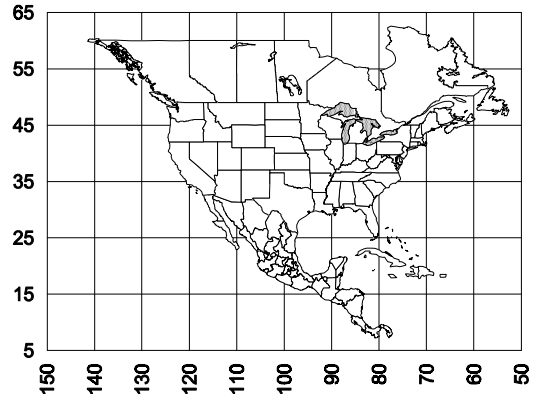
Discussion. The worker is relatively small (total length about 2 mm), honey colored, to dark brown with yellowish brown legs. The shaft of the scape is without erect hairs, but fine, suberect hairs may be present. The tibiae are also without erect hairs on the extensor surface. The eye is small (maximum diameter 0.05 mm), with approximately 9 ommatidia. It is located approximately two diameters from the anterior margin of the head. The entire dorsum of the head is covered with erect hairs, most are short (0.02 mm) and many are curved. The sculpturing on the head is partially rugose, but tends toward areolate posteriorly. The mesosoma is covered with many, erect hairs, scattered over the entire surface. The dorsum of the mesosoma is mostly covered with rugae, parts are areolate, the mesopleuron is usually covered with rugae, or striate, and also has scattered punctures between the rugae. The dorsal face of the propodeum has a few, transverse rugae. The petiolar peduncle is elongated, almost as long as the height of the node, the ventral tooth is well-developed. The dorsum of the node is mostly covered with punctures, although rugulae may be present on the posterior face, and may even cover most of the node. The anterior ventral process on the postpetiole is what wedge-shaped, and pointed somewhat anteriorly, and passes at least slightly under the posterior peduncle of the petiole. The petiole, postpetiole, and gaster are covered with scattered, erect and sub erect hairs,.

The specimens from the state of Guanacaste, Costa Rica differ from the paratype, in having a more rugose petiolar node, and having the subpostpetiolar process directed more anteriorly, and in having the hairs on the dorsum of the gaster being of two distinct lengths (completely erect hairs are 0.08 mm in length, the shorter suberect hairs are 0.04 mm in length). Additionally, the eyes have about 12 ommatidia, and the hairs on the dorsum of the head are slightly longer. They are assumed to be conspecific.

Specimens from near Palenque differ in having abundant hairs on the antennal scape, which are slightly raised from the surface (Fig. xx). Note this is different species 2/9/04

This species is nearly identical to *R. cuneola*, with both species having a wedge-shaped process on the anterior ventral surface of the postpetiole. They can be separated, as *R. innotabilis* has a slightly larger eye, has short (0.02 - 0.04 mm), but noticeable erect hairs on the dorsal surface of the head (hairs on the dorsum of the head of *R. cuneola* are difficult to see most are approximately 0.1 mm and largely decumbent) , and has rugulae on the side of the mesopleuron, usually with interspersed punctures (the mesopleuron of *R. cuneola* is punctate, without rugulae, although the punctures may be in rows). The erect hairs on the first tergum of the gaster are much more abundant *R. innotabilis*, they are sparse, or completely lacking in *R. cuneola*. Both species that the wedge-shaped process on the ventral surface of the postpetiole. The abundant, erect hairs on the dorsum of the gaster would distinguish this species from *R. foreli*. The lack of erect hairs on the antennal scape would separated from *C. creightoni*, and the scattered erect hairs on the dorsum of the mesosoma would distinguish it from *R. curvipubens*.

Distribution. México: Chiapas (12 mi NW Ocozocoaulta), Nicaragua: Matagalpa (Hotel Selva Negra), Costa Rica: Guanacaste (Maritza Field Station [800-875m, #'s 17666, 17667, 17668, 17678, 17712, 17734, 17736, 17737 23 ΔΔ CWEM, Cacao Field Station, 1400m, #'s 17682, 17710, 17728, 17731, 6 ΔΔ CWEM, Rincón de La Vieja, Las Pailas, 400m, 17676 1 Δ CWEM), possibly south to Colombia: Magdalena (Parque Tyrone), Guajira (Don Diego) .



Map 13. *Rogeria innotabilis*.

Habitat. Moist forests, montane hardwood forests, dry tropical forest. Elevation range from 10 - 1200 m (Kugler, 1994).

Biology. Most specimens have been collected in leaf litter extractions.

Rogeria leptonana Kugler

Rogeria leptonana Kugler, 1994:58 - 60, Figs. 66 - 70, worker, female, male, Panamá, Panamá, Barro Colorado Island

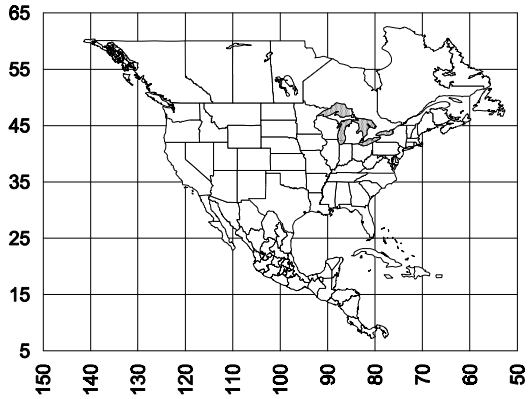
Figs. 6 (side view, propodeal angles); Map

Discussion. These ants are small (2 mm total length), honey-colored ants, which completely lack propodeal spines. Most of the hairs on the antennal scape are nearly appressed to the surface, but a few hairs, which are approximately the same length thickness and length, are erect to suberect. The dorsal surface of the head has many erect hairs, which are tiny (two distinct lengths, some abundant hairs 0.01 mm in length, other sparse hairs 0.03 mm in length). The eye is small (maximum diameter 0.07 mm, located nearly two diameters from the anterior margin of the head. The dorsum

of the mesosoma is covered coarse, longitudinal rugulae, those on the dorsal face of the propodeum are transverse, the side of the mesosoma has similar rugulae, that are slightly finer. The petiolar peduncle is elongated, and has a well-developed ventral tooth. Most surfaces have scattered, erect and suberect hairs, especially the gaster.

The lack of propodeal spines would separate this species from most of the others in the genus. It could be confused with *R. foreli* or *R. cuneola*, but these two species usually (*R. cuneola*) or always (*R. foreli*) lack erect hairs on the dorsum of the gaster, which are present and abundant in *R. leptonana.* The relatively small eye would separate it from *R. inermis*, in which the eye is approximately as long as the distance to the anterior margin of the head. The abundant erect hairs on the dorsum of the mesosoma would separate it from *R. curvipubens*. Finally, the lack of propodeal angles would distinguish it from the very similar *R. neilyensis*.

Distribution. México: Chiapas (Ocosingo Valley), Costa Rica: San José (Cerro Pico Blanco) Panamá: Panamá (Barro Colorado Island, Frijolito - CWEM), Chiriquí (Nueva California, Volcán - CWEM, 2 k NE Busqueta - CWEM, 5.7 k NE Boquete - CWEM, 20.4 k N San Félix - CWEM), Colombia: Guajira (near Don Diego), Magdalena (Parque Nacional Tayrona), Dominican Republic.



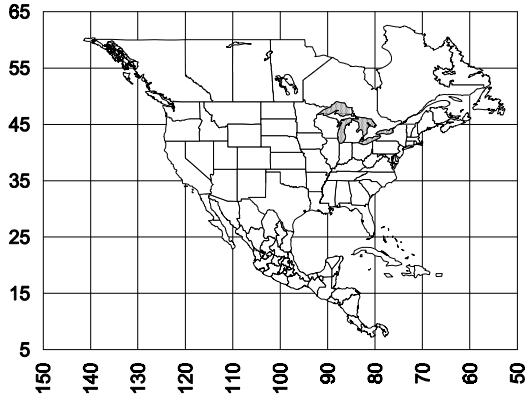
Map 14. *Rogeria leptonana.*

Habitat.
Biology.

Rogeria maesi new species

Figs. ; Map

Discussion.
Description.
??? Worker: HL, HW, SL, EL, WL, SpL 0, CI.
Type Series: Holotype worker,
Etymology:
Distribution. Known only from the type locality of.



Map 15. *Rogeria maesi.*

Habitat.
Biology.

Rogeria neilyensis *Kugler*

Rogeria neilyensis Kugler, 1994:63 - 64, Fig. 43, worker, Costa Rica, Puntarenas, 3 km N Cuidad Neily

Figs. 7 (propodeal spines), 23 (side view); Map

Discussion. The worker is a small (total length slightly more than 2 mm), honey-colored ant, with small angles on the propodeum. Nearly all of the hairs on the scape are appressed to the surface, but occasionally an erect or suberect hair is present. The tibiae are without erect hairs. The dorsum of the head has several, erect hairs, (0.03 mm), in addition to smaller, decumbent hairs. The eye is small (maximum diameter 0.06 mm), located nearly two diameters from the anterior border of the head. The eye has approximately 6 ommatidia. The mesosoma has coarse rugulae, mostly longitudinal, except for the dorsal face of the propodeum, which are transverse. The angles on the propodeum are approximately as wide at the base as their length. The petiolar peduncle is elongated, and the petiole has a well differentiated node. The tooth on the ventral surface of the peduncle is well-developed. Most surfaces have erect or suberect hairs, including the mesosoma, petiole, postpetiole, and all surfaces of the gaster.

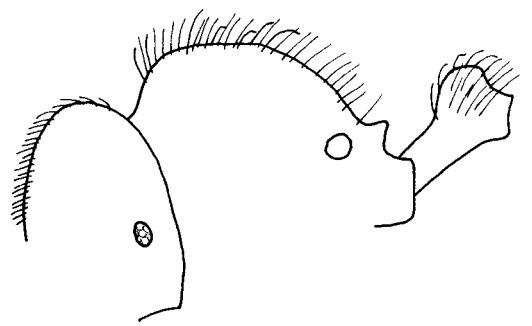
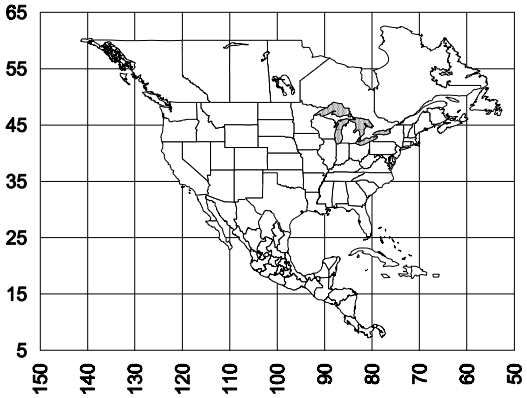


Fig. 24. Side view of a worker of *R. neilyensis* (paratype).

This species could be separated from *R. foreli* and *R. cuneola* by the abundant, erect and suberect hairs on the dorsum of the gaster. The tiny eye would separate it from *R. inermis*, in which the maximal diameter is about as long as the distance between the eye and the anterior border of the head. It is very similar to *R. cuneola*, from which can be distinguished by the presence of angles on the propodeum. compare with leptonana???

Distribution. Costa Rica: Puntarenas (3 km N Ciudad Neily, Fundación Neotrópica - CWEM, Cerro Helado - CWEM, 17 k NE Rincón - CWEM), San José (Cerros de Escarza - CWEM)



Map 16. *Rogeria neilyensis.*

Habitat. Second growth rain forest, in lowland rain forest, mixed tropical forest, ridge forest.

Biology. All of the specimens have apparently been extracted from leaf litter.

Rogeria scandens (Mann)

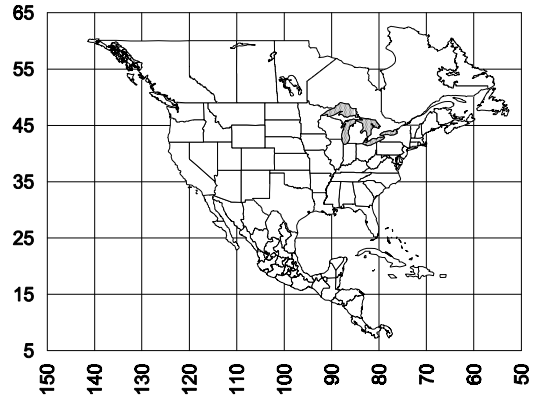
Macromischa scandens Mann, 1922:30, Fig. 14, worker, Honduras, Lombardia

Figs. 11 (side view); Map

Discussion. The worker is a relatively large (total length about 3 mm) ant, which is dark reddish-brown, with lighter appendages and a lighter colored gaster. The eye is relatively large (maximum diameter 0.15 mm), the diameter is greater than the distance between the anterior edge of the eye and the anterior edge of the head. The scape has several, erect hairs, in addition to the numerous suberect and decumbent hairs. The dorsum of the head is covered with golden, erect hairs, as is the entire dorsum of mesosoma, the dorsum of petiole, postpetiole, and all surfaces of the gaster, several suberect hairs are also present, especially on the dorsum of the head and the dorsum of the gaster. The hairs on the extensor surfaces of the tibiae are suberect, or erect. The mesosoma is mostly rugose, including the mesopleuron, and the pronotal spines are well-developed (maximum length 0.18 mm). The anterior face of the petiole forms nearly a straight line from the point of attachment to the apex, the posterior face is broadly rounded. The subpeduncular tooth is well-developed and sharp. The anterior face of the postpetiole also forms a nearly straight surface (although slightly convex) to the apex, where the posterior face is slightly concave.

The unusual shape of the petiole would separate this species from nearly all of the others. Other species which have a similar petiolar form, would include *R. terescandens* and *R. tonduzi*. It can be easily separated from *R. terescandens*, as the petiolar node is present, with a definite, nearly vertical, concave posterior face. It is more difficult to distinguish from *R tonduzi*. The best character is the form of the erect hairs on the dorsum of the pronotum, which are mostly straight, not curved as in *R. tonduzi*.

Distribution. México: Oaxaca (18 k S of San José Pacífico), Honduras (Lombardia), Costa Rica: Guanacaste (Maritza Field Station) Puntarenas (Osa Península), Panamá: Panamá (Barro Colorado Island), Chiriquí (Bocas del Toro La Fortuna area).



Map 17. *Rogeria scandens.*

Habitat. Lowland tropical rain forest to wet montane cloud forest, hardwood forests and arid pine forests at an elevation of 2060 m (México).

Biology. Specimens are occasionally collected in extractions of leaf litter. The specimens from Mexico were collected under a stone. Kugler (1994) mentioned that specimens from the Barro Colorado Island were collected from *Heliconia*.

Rogeria terescandens Kugler

Rogeria terescandens Kugler, 1994:39, Fig. 21, worker, Costa Rica, Osa Peninsula, Sirena

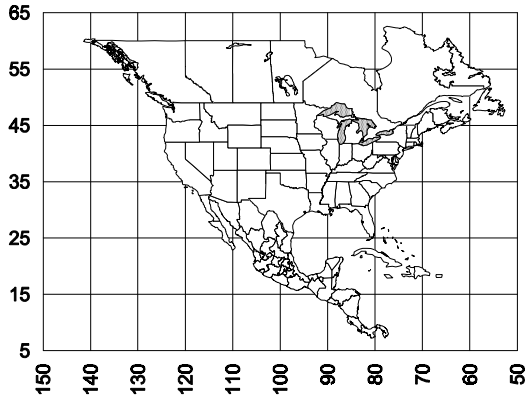
Figs. 8 (side view); Map

Discussion. This is an unusual, relatively large (total length 3 mm), dark brown species, with yellowish-brown legs, and with the side of the pronotum and dorsum of the mesonotum covered mostly with poorly defined punctures. Nearly all of the hairs on the antennal scape are completely appressed to surface, except for a few tiny hairs at the apex, and a single, suberect hair on the left antennal scape of the holotype, near the apex. The dorsum of the head has a few, scattered, coarse, relatively long (0.08 mm), erect hairs. The eye is large (maximum diameter 0.17 mm), with approximately 60 ommatidia, and located about one diameter from the anterior border of the head. The hairs on the dorsum of the mesosoma are scattered, and relatively long (0.08 mm - 0.15 mm). The propodeal spines are well-developed, long (0.13 mm) and sharp. The propodeal spiracle is pointed posteriorly. The metapleural angles are well-developed and splayed outwards when viewed from above. The petiolar peduncle is well-developed, elongated, with a well-developed, sharp, ventral, anteriorly pointed tooth. The node of the petiole is poorly developed, and only slightly raised above the outline which would be formed by connecting the surfaces of the anterior and posterior peduncles. The petiole, postpetiole, and gaster have erect hairs similar to those on the dorsum of the head, about 0.07 mm in length.

This species could be easily separated from all of the others in the genus by the punctated sculpture on the side and the pronotum and dorsum of mesosoma. The larger eyes would also separate this species from many of the others in the genus. Finally, the unusual shape of the petiole, and posteriorly directed propodeal spiracle would easily distinguish this species from all others. It differs from *R. scandens* and in lacking the coarse rugae on the mesosoma, lacking the well-developed node of the petiole having a posteriorly directed propodeal spiracle, and in having a much larger eye.

This species is known only from the holotype, and one paratype worker.

Distribution. Costa Rica: (Osa Peninsula at Sirena).



Map 18. *Rogeria terescandens.*

Habitat. Lowland tropical forest.

Biology. Kugler (1994) summarizes the little we know about this species. All specimens were collected on trees in a lowland forest on the Pacific side of Costa Rica. The holotype was collected on the trunk of a tree which was felled approximately two weeks previously. The paratype was found beneath a thick epiphyte mat on a fallen branch. This species is apparently rare, as it was not found among the abundant

Costa Rica leaf litter fauna which was given to me by Bob Anderson.

Rogeria termitophila new species

Figs. ; Map

Discussion. The worker is a small (total length slightly greater than 2 mm), medium brown specimen, with pale brown appendages. The hairs on the antennal scape are small, and appressed to the surface, except for a few hairs near the apex. The eye is relatively large, with approximately 15 ommatidia, the maximum diameter is approximately equal to the distance from the anterior edge of the eye to the anterior edge of the head. The dorsal surface of the head posterior to the clypeus is without erect hairs, as is the dorsum of the mesosoma, the petiole and postpetiole, and the first tergum of the gaster. Appressed hairs are present on these surfaces, but barely noticeable, except for the dorsal surface of the gaster. The mesosoma shows little evidence of sutures, especially on the dorsum, and the promesonotum is swollen and inflated, as in *R. foreli*. The propodeal spines are small (0.07 m) and the base of the spine is almost as wide as the length. The petiolar peduncle is about half the length of the height of the node. The anterior and posterior faces of the node are nearly parallel, forming a rounded surface dorsally. The postpetiole is rounded when viewed in profile, with the dorsal face slightly overhanging the posterior face. The sculpturing on the head and mesosoma is fine, consisting mostly of poorly defined punctures with slight evidence of striae, especially on the side of the head, and the dorsal face of the propodeum. The gaster is smooth and glossy.

this species is very closely related to *R. foreli*, with the shape of the mesosoma being essentially identical. The swollen mesosoma, together with the lack of erect hairs on the first gastral tergum, would separate it from most of the other species in the genus. It can be distinguished from *R. foreli* by the much larger eyes.

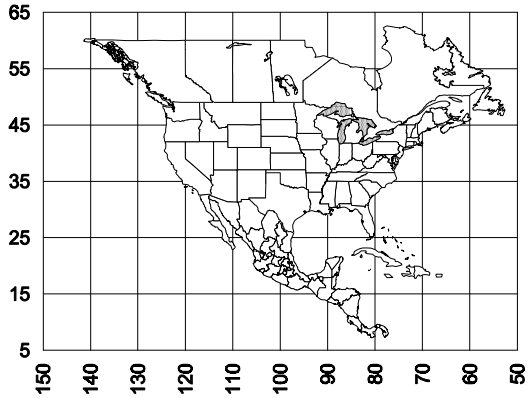
Description.

??? Worker: HL, HW, SL, EL, WL, SpL 0, CI.

Type Series: Holotype worker,

Etymology:

***Distribution*.** Known only from the type locality in central Colombia**.**



Map 19. *Rogeria termitophila don't need map.*

Habitat, Disturbed second growth tropical forest**.**

Biology. The type series was collected in the mud dome of a termite nest.

Rogeria tonduzi Forel

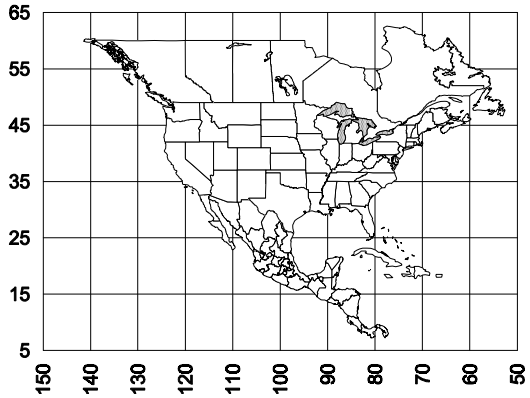
Rogeria tonduzi Forel, 1899: 53, worker, Costa Rica (no specific locality), Kugler, 1994:41 - 42, Figs. 85 - 86.

Figs. 10 (side view); Map

Discussion. The worker is a relatively large (nearly 3 mm total length), pale brown specimen. The eye is relatively large(maximum diameter 0.13 mm), which is slightly longer than the distance between the anterior edge of the eye and the anterior margin of the head. The scape has several, erect hairs, in addition to decumbent or appressed hairs. The dorsal surface of the head also has many erect hairs, the hairs on the dorsum of the mesosoma are curved, and not actually erect. The petiolar spines are well-developed (0.15 mm). The anterior face of the petiole forms nearly a straight line, from the point of attachment to the apex. The anterior peduncle is relatively long, nearly as long as the height of the petiole. The subpetiolar tooth is developed, but small. Apex of the petiole forms a horizontal surface, and is rounded into the posterior surface, which is only slightly concave. The anterior face of the postpetiole is broadly convex and meets the vertical posterior face near the posterior edge. The hairs on the petiole, postpetiole, and gaster are mostly curved, and few are actually erect, the hairs on flexor surfaces of the tibiae are mostly suberect.

The nearly straight anterior face of the petiole would separate this species from nearly all the others in the genus. It could be confused with *R. terescandens* and *R. scandens*. Separation from *R. terescandens* is relatively easy, as the petiole has a definite node, with a horizontal apex. In addition, the hairs on the pronotum are curved and suberect or even decumbent, whereas they are erect in *R. terescandens*. It is more difficult to distinguish from *R. scandens*, but the presence of the curled hairs, which are not actually suberect on the pronotum would distinguish it from *R. scandens*, in which the hairs are obviously and nearly completely erect.

Distribution. Guatemala (unknown locality), Costa Rica: Heredia (Puerto Viejo, La Selva Biological Station), Puntarenas (Carara Biological Reserve, Corcovado National Park).



Map 20. *Rogeria tonduzi.*

Habitat. Unknown.

Biology. Kugler (1994) reports that most individuals were collected forging on the ground, or in vegetation. One worker was collected in a *Cyphomyrmex* nest and another among *Pheidole* workers. One nest was collected in cacao tree.

Literature cited

Kugler, C. 1994. Revision of the ant genus *Rogeria* (Hymenoptera: Formicidae) with descriptions of the sting apparatus. Journal of Hymenoptera Research, 3: 17 - 89.

Mackay, W. P., A. Rebeles, H. Arrendondo, A. Rodríguez, D. González and S. B. Vinson. 1991. Impact of the slashing and burning of a tropical rain forest on the native ant fauna (Hymenoptera: Formicidae). Sociobiology 18: 257 - 268.