



## New ants (Hymenoptera: Formicidae) from Micronesia

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### Abstract

Nine new species of ants collected in Micronesia are described and illustrated: *Camponotus eperiamorum* n. sp. (Pohnpei I.), *C. erythrocephalus* n. sp. (Yap I.), *C. flavicomans* n. sp. (Palau), *C. marianensis* n. sp. (Mariana Is.), *C. peleliuensis* n. sp. (Palau), *Pheidole recondita* n. sp. (Marianas and eastern Caroline Is), *Vollenhovia kaselela* n. sp. (Pohnpei I.), *V. mwereka* n. sp. (Pohnpei I.), and *V. pwidikidika* n. sp. (Pohnpei I.). They were discovered while cataloging the ant fauna of Micronesia, and several of them were already noted as possible new species when found in museum collections. Type series for five of the species include modern collections made during the course of this study.

**Key words:** Formicidae, ant, Micronesia, Pohnpei, Marianas, Palau, Yap, *Camponotus*, *Pheidole*, *Vollenhovia*

### Introduction

#### Project Background

The insect fauna of Micronesia is fairly well understood for such a vast tropical area, not only because the small sizes and remoteness of its islands limit the number of species, but also because naturalists have traveled throughout the region since the 19<sup>th</sup> century. The *Insects of Micronesia* series, begun in 1954, has been the main venue for modern entomological reports about the area, but a study of the Formicidae (ants) has never been included. Micronesian formicid work was started by Drs. E. O. Wilson, R. W. Taylor, and M. R. Smith, but events and other projects precluded its completion; they borrowed and examined museum specimens, and Smith typed a complete inventory of known Micronesian collections, but the project went no further. I learned of this omission while making ant collections on the island of Pohnpei, and so I completed a faunistic study of the region that includes new collections, an identification key, detailed collection records, distribution maps, and a biogeographic discussion (Clouse, in press). Here I describe those Micronesian species examined during that study which appear to be as yet unnamed, known from more than one specimen, and not members of perceived “difficult” species complexes.

Although faunistic studies have traditionally also contained important taxonomic innovations, I have decided to present new species descriptions in this paper so that they may receive appropriate attention. Except for the forms collected exclusively by me on Pohnpei Island between 1994 and 2002, most of the specimens discussed here were already labeled as undetermined, possibly new, or “near” other species when I found them in the MCZ (Museum of Comparative Zoology), ANIC (Australian National Insect Collection), and NMNH (National Museum of Natural History) collections. Thus, they have long been ripe for detailed work, though revisions of their genera do not seem imminent.

Because early taxonomic work generated a plethora of junior synonyms that burden us to the present, it is now generally agreed that caution is necessary when naming new forms. Even with the comprehensive myrmecological collections and rapid sharing of digital images available today, previously named species can be missed. This problem is mitigated when dealing with genera like *Vollenhovia*, which have relatively few named species, or, with larger groups, consulting an authority, as I do here with *Pheidole*. Thus my naming of several species in the large genus *Camponotus* requires justification: it is a genus that contains nearly a thousand named species in a polyphyletic jumble of almost 50 subgenera (Brady *et. al* 2000; Bolton 1995) that no contemporary myrmecologist claims to understand. In addition, the genus contains difficult species complexes, such as the *C. nigriceps*-group, which molecular studies have suggested contains synonymous species as well as cryptic ones (McArthur & Adams 1996). Clearly, previously named forms can easily be missed in *Camponotus*, even after examinations such as mine of the collections at MCZ, ANIC, and NMNH, descriptions and digital images of Japanese species (Japanese Ant Database Group, 2003), and digital images of over 70 unidentified Bornean species of *Camponotus* kindly shared by M. Pfeiffer on the internet. Nonetheless, I have decided to name the *Camponotus* species here for two reasons. First, for the majority of *Camponotus* species the mesosomal profiles, pilosity, head shapes, petiolar proportions, and coloration vary considerably and are often found in striking combinations; thus, I feel confident I have not seen these species in other collections. Second, even within difficult complexes, biogeographic information leads me to favor the hypothesis that certain forms are valid species. This is the case with *C. eperiamorum* **n. sp.** below, which is one of the most common and conspicuous ants in the mid- to upper-elevation forests on Pohnpei Island. It is very close to some other members of the *Camponotus maculatus* species group, however, not only is it visually distinct, but it apparently is also (a) not found on any other islands in Micronesia and so is unlikely to be a natural range extension of an Indonesian or New Guinean species and (b) not associated with human-disturbed areas and is thus unlikely to be on Pohnpei as a result of human portage.

#### Terminology

Species and subspecies names follow Bolton (1995), and all taxonomic references are provided. For those unfamiliar with formicid anatomy, a number of good diagrams are available; the ones used most often for this study were found in Wilson and Taylor (1967) and Hölldobler and Wilson (1990) (but note that “mesosoma” is used in the present work rather than the former term “alitrunk”). My measurements (all in mm) and indices are standard for myrmecological descriptions, as are their abbreviations:

TL = total length (when viewed from above)

HL = maximum head length (when viewed from the front, not including mandibles)

HW = head width (at widest point, including eyes)

CI = cephalic index =  $HW \times 100 / HL$

SL = scape length

SI = scape index =  $SL \times 100 / HW$

PW = pronotal width (at widest point when viewed from above)

ML = mandible length (straight line from lateral mandibular insertion to apex when viewed from the front)

PL = Petiole length (when viewed from the side and including the peduncle)

DPW = Dorsal petiolar width

PWI =  $DPW \times 100 / PL$

PPL = Postpetiole length (when viewed from the side)

PPW = Dorsal postpetiolar width

PPWI =  $PPW \times 100 / PPL$

Micronesia encompasses most of the Western Pacific and includes several different types of islands, the largest of which are smaller than the Polynesian islands of Hawaii, Samoa, or Tahiti. Micronesian islands are loosely organized into different archipelagoes, which also roughly correspond to the various political units in the area: The Republic of the Marshall Islands consists of two large chains of atolls in the east; north of New Guinea are the high volcanic islands, atolls, and uplifted coral islands of the Carolines, now the Federated States of Micronesia (FSM) (the states, from East to West, being Kosrae, Pohnpei, Chuuk, and Yap); the Republic of Palau encompasses limestone islands and atolls to the far west, near Indonesia; the Republic of Kiribati is composed of atolls in the Line, Phoenix, and Gilbert island chains to the south; and the Bonin Islands are a group of volcanic Japanese possessions to the far north. The Mariana Islands, a tight archipelago just north of the FSM containing the largest islands in the area, is split between two political entities, both in union with the United States: the Commonwealth of the Northern Mariana Islands and the Territory of Guam. A very good introduction to the island types and general characteristics of their biota can be found in Gressitt (1954).

Collection data are organized first by area (underlined), then main island or atoll (I. or A.), municipality (M.) or atoll islet (I.), and finally locality name, if known. Taxa are arranged in the plates alphabetically.

All specimens have been deposited in the Museum of Comparative Zoology, Harvard University, USA, unless noted as property of the National Museum of Natural History, Washington, DC, USA.

## New forms described

### Subfamily Formicinae

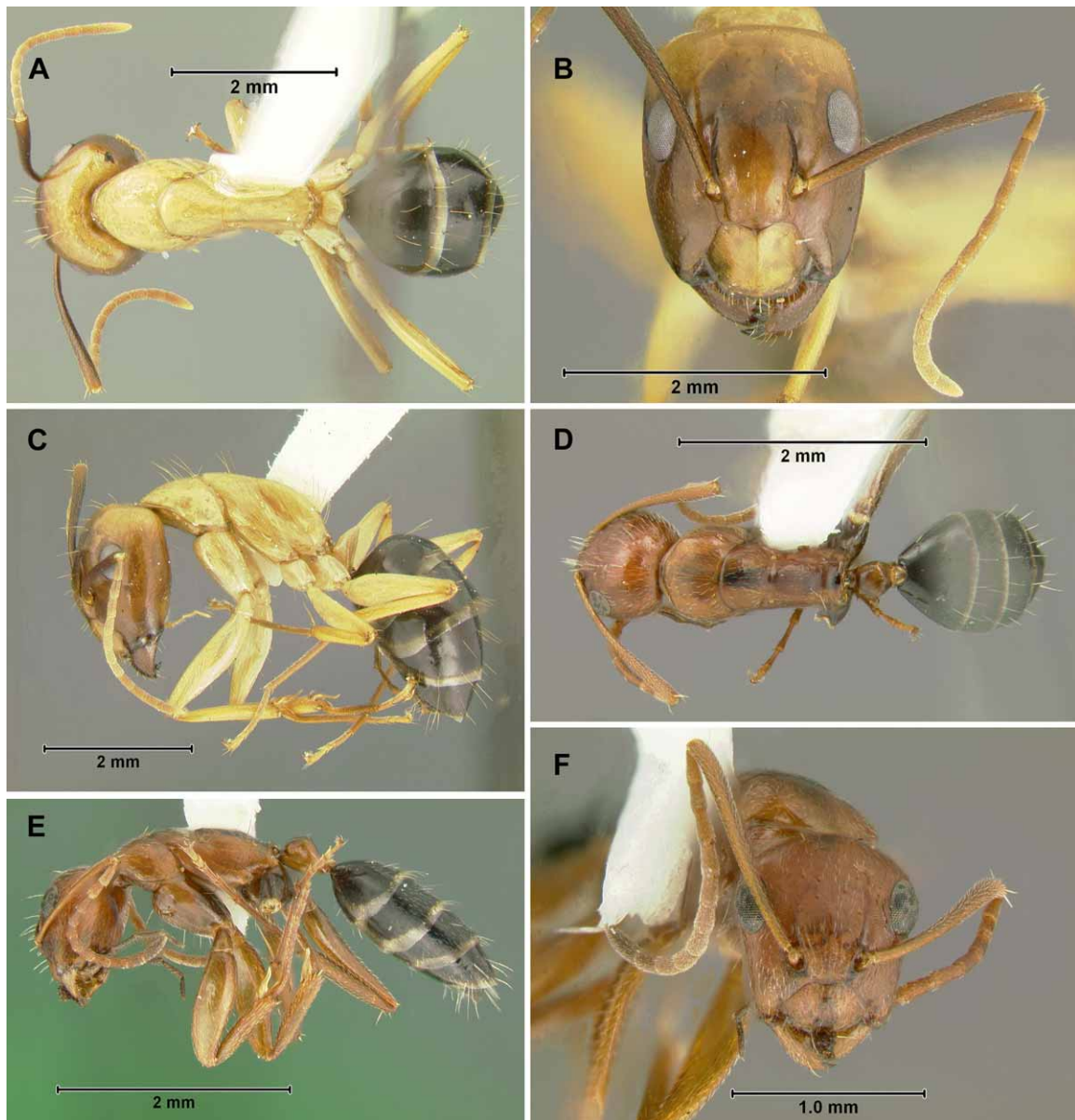
#### *Camponotus eperiamorum* n. sp.

Plate 1A–C

HOLOTYPE WORKER: TL 5.60, HL 2.15, HW 1.70, CI 79, SL 2.00, SI 118, PW 1.15, ML 0.95. Mandible outer margin gently curved to an apex of about 75 degrees, the masticatory margin straight in front view, leading to an angle of 100 degrees and a basal margin about half the length of the masticatory margin. Masticatory margin with six teeth, which gradually diminish in size from the apex (the basal tooth in some specimens broad or with a slight double point). Diastema between basal tooth and angle equal to half the width of basal tooth. Clypeus continuing anteriorly past mandibular insertions a distance slightly less than length of apical tooth, then straight across. Median clypeus curved away from vertex, antennal insertions separated from clypeus by a distance slightly more than distance from nearest clypeal margin to clypeal midpoint. Head longer than wide. In frontal view, eyes located vertically halfway between posterior clypeus and vertex; horizontally, inner margins halfway between frontal lobes and sides of the head, their width reaching halfway to the lateral edge of the head in larger workers and all the way in smaller ones. Antennae 12-segmented. Scape extending beyond the vertex by  $\frac{2}{5}$  its length. Mesosoma in profile gently sloping from anterior pronotum to dorsal propodeum, with moderate propodeal declivity. Petiolar node moderate height, anterior face half the height of posterior face and parallel. Color: Mesosoma yellow, gaster glossy black, head mostly deep orange-brown. Each gastral tergite with clear strip along posterior fifth. Head abruptly becomes same color as dorsal pronotum at vertex; border separating the coloration of vertex from remainder of the head located from the mid-vertex by a distance about as wide as width of the scape, dropping down to level of the eyes laterally. Mandibles darker than head and contrasting with clypeus. Clypeus similar in color to vertex, especially toward mandibles. Teeth of the mandibles, scrobes, sutures, and joints on the head darker than surrounding cuticle. Pilosity: On head, frontal area lateral to the eyes lacking long, standing hairs; with layer of small, recumbent, light hairs all over head; long, standing hairs numerous on front and back, frontal ones starting at clypeus and continuing to vertex, becoming less numerous but longer. Mesosoma with three pairs of long,

standing hairs clustered on pronotum, two pairs clustered on mesonotum, and ten stout hairs of various lengths scattered on the propodeum. Each gastral tergite with 6–9 rather evenly spaced, short, standing hairs immediately before clear strip along posterior edge. Just after end of each tergite a row of four longer hairs on next tergite. Sculpturing: Surface smooth and shining, although not glossy.

PARATYPE WORKERS: TL 5.10–6.50, HL 1.55–2.55, HW 1.05–2.30, CI 68–90, SL 1.95–2.20, SI 88–200, PW 0.85–1.30, ML 0.60–1.00. As in the holotype except head approaching square in larger workers, scape extending beyond the vertex by a range of 1/2 to 1/6 scape length in smaller to larger workers, some workers darker but retaining same contrast between body parts, area lacking long hairs lateral to the eyes extending around to the lateral back of head in smaller workers.



**PLATE 1.** *Camponotus eperiamorum* n. sp. A–dorsal, B–frontal, C–lateral; *Camponotus erythrocephalus* n. sp. D–dorsal, E–lateral, F–frontal

PARATYPE QUEENS: TL 8.50–9.30, HL 2.20–2.40, HW 2.05–2.15, CI 88–93, SL 2.00–2.20, SI 95–107, PW 1.85–2.10, ML 0.90–1.10. Similar to workers except for larger mesosoma and sclerites associated with wings. Also, eyes larger and located more laterally than in major workers, their profile meeting the sides of the head in frontal view. Heads more square than those of largest workers. Mesosoma large, three times

wider than workers and swollen between first and middle coxae. Metanotal tergite dark brown to black, contrasting sharply with yellow-orange mesosoma.

**PARATYPE MALE:** TL 6.00, HL 1.10, HW 1.20, CI 109, SL 1.40, SI 117, PW 1.45, ML 0.45. Mandible edentate, curving to a point at the apex, angle rounded, basal margin twice length of masticatory margin. Posterior clypeus bilobed, curving down from each side to a point medially. Frontal lobes reduced, interrupted by torulus. Compound eyes large, ocelli large and elevated. Antennae 13-segmented. Mesosoma large, pronotum and mesosternum swollen. Petiolar node short, anterior and posterior faces not distinctly parallel. Coloration of mandibles, clypeus, and between the antennal insertions light orange to yellow; rest of head dark orange ranging to near black between the ocelli. Metanotal tergite dark brown, as with female.

**Similar species:** Among species in Micronesia, *Camponotus eperiamorum* n. sp. is most similar to *C. chloroticus* Emery 1897, and it is thus a member of the difficult *maculatus*-group in the Pacific. (*Camponotus maculatus* was originally described by Fabricius in 1782, but see Wilson and Taylor [1967] and Clouse [in press] for more history.) Morphologically, the only difference I can find between *eperiamorum* and *chloroticus* is the dearth of long hairs on the sides of the head in *eperiamorum*. The coloration, however, is quite distinct and makes *eperiamorum* easy to identify in the field. Another close relative of *chloroticus* in the Pacific is *C. navigator* (Wilson & Taylor 1967) in Polynesia. However, *navigator* differs from *chloroticus* (and thus, generally, *eperiamorum*) in several small but distinct morphological features, and its coloration (overall reddish to blackish brown) is very different from both *chloroticus* and *eperiamorum*. The bicoloration of *eperiamorum* resembles some forms in the *C. maculatus* group, especially *C. arrogans* (Smith 1858). However, *eperiamorum* is unique in having an extremely light yellow mesosoma and displaying remarkable consistency in its coloration among various collections. *Camponotus arrogans* is more reddish, and its head is uniform in coloration, different from *eperiamorum*, which lacks red or orange and has a light clypeus and vertex. Moreover, other forms, including *arrogans*, have significant pilosity on the sides of the head, unlike *eperiamorum*, and they often have light markings on the gaster, absent in *eperiamorum*. Finally, *eperiamorum* appears to be a native Pohnpeian species from its habitat of high- to mid-elevation native forest.

**Etymology:** This species is named in honor of the Eperiam family of Einpein Village in Kitti Municipality on Pohnpei Island. Emensio Eperiam has had a long career in environmental protection, historical preservation, and tourism on Pohnpei. His much-loved, late wife, Mercedes, and their family demonstrated extreme hospitality and generosity to those of us who wanted to hike to the interior. His sons Abram, Casandro, and Paulo guided me to remote areas and kept me from becoming lost while I collected.

**Type locality:** Pohnpei Island, Pohnpei State, Federated States of Micronesia, in mid-elevation forest.

**Type series:** Holotype worker and 2 paratype workers: FSM Pohnpei: Pohnpei I., Mt. Nankep ["Mt. Delennankap" on label] (1700–2000 ft., forest plants, Townes, 10-VIII-1946, NMNH). Other paratypes (85 workers, 4 queens, 1 male): FSM Pohnpei: Pohnpei I., Kitti (on dead fern branch in high-elevation sakau clearing, Clouse, 24-III-2000), Lehnpeinpohn Waterfall (on road to falls, under dead leaves on ivory nut tree, Okihiro and Clouse, 26-XI-1995), Mahnd (along river above village, elevation 200 m, large nest inside dead ivory nut branch, Clouse, 29-X-1994), Mahnd (0.5 mile up river from village, large nest in dead tree fern branch leaning on ivory nut tree, Clouse, 29-X-1995), Malen Pahnpe (above Keprohi Falls at elevation 350 m, on ivory nut along river, Clouse, 9-VII-1994), to Mt. Nahnalaud (upland forest camp near river at elevation 300 m, carrying food up tree, Clouse, 5-III-1995), to Mt. Nahnalaud from Kitti (walking on dead log at elevation 300 m, Clouse, 8-IX-1995), Mt. Nankep ("1660," forest plants, Townes, 8-II-1946, NMNH), Awak (alates at light at residence, Okihiro, 9-VI-1996)

**Other specimens examined:** FSM Pohnpei: Pohnpei I., Nankep (1800 ft., [three specimens on monocot midribs—possibly elephant grass, *Pennisetum purpureum* Schumacher—clenching it with mandibles, covered with dried hyphae and with a ~2.5 cm fruiting body coming out from behind each head], Townes, 13-VIII-1946, NMNH)

***Camponotus erythrocephalus* n. sp.**

Plate 1D–F

**HOLOTYPE WORKER:** TL 3.95, HL 1.02, HW 0.95, CI 93, SL 1.30, SI 137, PW 0.73, ML 0.38. Mandible outer margin strongly curving to a sharp apical tooth, the apex parallel to the anterior clypeal margin. (Holotype with material in mandibles, so mandibles and anterior clypeus described below from paratypes.) Median clypeus tapering and dipping away from the vertex centrally, antennal insertions separated from clypeus by a distance slightly more than the distance from nearest clypeal margin to the clypeal midpoint. In front view, head tapering slightly toward the mandibles, vertex rounded, eyes at upper corners. Bottom margin of eyes located above halfway point of the head and slightly above level of the antennal insertions; their inner margin slightly less than halfway from frontal lobes to sides of the head, their outline breaking the outline of the sides of the head. Antennae 12-segmented, the scape extending beyond the vertex by more than half its length. Mesosoma broad and shallow in profile, sloping rather evenly from the anterior pronotum to the posterior propodeum, a slight depression at the metanotal groove and an even slighter one at the promesonotal suture, propodeal declivity distinct but slight. Petiole about 1.5 times longer than tall, its anterior edge rising only about the same distance as the length of the peduncle, then sloping up for a distance slightly less than the height of the posterior edge. **Color:** Reddish orange head and mesosoma contrasting against a mostly black gaster. Head even in color, mandibles same shade as the remainder of the head. Mesosoma, legs, and petiole same color as head, although coxae slightly darker. Gaster not entirely black but with four grey stripes made by whitish-clear strip along posterior of each gastral tergite; strip is slightly wider than maximum width of the scape. Anterior gastral tergites approach color of mesosoma centrally. **Pilosity:** Head dominated by recumbent silver hairs interspersed with long, standing hairs on frons and central clypeus. Standing hairs vary in height, but pair closest to vertex as long as maximum width of eyes. Mesosoma with even silver sheen created by recumbent hairs, propodeum with two pairs of long, standing hairs. Petiolar node with four long, backward-pointing hairs arranged in two pairs, one on each side of its highest point; inner hairs slightly shorter than outside ones. Each gastral tergite with about ten long, silver hairs immediately anterior to posterior grey strip. In addition, two adjacent pairs of long hairs lie in line along middle of each tergite. **Sculpturing:** Head with slight puncturing and body with shallow whorls, but mostly shining.

**PARATYPE WORKERS:** TL 4.50–5.15, HL 1.23–1.28, HW 1.03–1.13, CI 81–93, SL 1.37–1.42, SI 121–137, PW 0.82–0.93, ML 0.40–0.47. Five teeth on the masticatory margin visible when the mandibles are closed, declining in size from the apex. Clypeal margin almost straight but curving out slightly. Scapes extending beyond the vertex by a distance less than half their length.

**Similar species:** The flattened petiole, monochromatic reddish anterior and contrasting black gaster appear unique in this species. Among unidentified collections from Borneo, only two species have a resemblance, but the one closest in coloration has a tall petiole, and the one similar in shape is monochromatic black and overall too narrow. Given that it has only been collected on Yap Island in Micronesia, it appears to be a poor disperser and could easily be an island endemic.

**Etymology:** *Erythrocephalus* is Latin for “red-headed,” which is the distinguishing feature of this species.

**Type locality:** Yap Island, Yap State, Federated States of Micronesia

**Type series:** Holotype worker: FSM Yap: Yaptown, Yap I., Mt. Matade (“No. 1087,” Townes, 12-VII-1946, NMNH). Paratype workers (2): FSM Yap: Yap I. (Goss, “Jul–Aug” 1950)

***Camponotus flavicomans* n. sp.**

Plate 2A–C

**HOLOTYPE WORKER:** TL 4.20, HL 1.33, HW 1.25, CI 94, SL 1.43, SI 114, PW 1.03, ML 0.53. Mandible outer margin strongly curving such that apical tooth points parallel to anterior clypeal margin. Five teeth on

the masticatory margin, declining gradually from the apex. Clypeus anterior margin curving out gently. Median clypeus curved slightly away from the vertex, antennal insertions separated by distance greater than distance from nearest clypeal margin to the clypeal midpoint. Head in front view somewhat rounded to square, tapered anteriorly, eyes being the widest part and vertex rounded. In frontal view, bottom margin of eyes located above halfway point of the head and above antennal insertions; their inner margins more than halfway from the frontal lobes and sides of the head, and their outlines breaking the outline of the sides of the head. Antennae 12-segmented, last segment only slightly longer than penultimate. Scape extending beyond vertex by distance nearly equal to half its length. Mesosoma in profile sloping gently from anterior pronotum to dorsal propodeum, then dropping severely, making a concave posterior surface. Petiole taller than long, anterior and posterior faces mostly parallel although bulging slightly dorsally. Color: Head mostly black, mandibles orange, scapes orange from insertions to halfway, and funiculus brownish black. Mesosoma mostly black although appearing slightly brownish anteriorly. Gaster black with grey stripes, formed by a whitish clear strip along posterior fourth of each tergite. Legs same color as mesosoma but becoming reddish at the tips of the tarsi. Pilosity: Mostly a covering of long, recumbent, silver hairs which become golden and more numerous on dorsal gaster, and, to a lesser extent, dorsal mesosoma and front and vertex of the head. Hairs orderly, with the appearance of having been combed. Head with a basic layer of thick and orderly silver recumbent hairs, mixed with short (often not as long as the distance between them), standing, bristle-like hairs between eyes and on clypeus. Mesosoma dominated by silver sheen as with head, then with moderately sized, standing hairs scattered dorsally from pronotum to propodeum. Gaster dominated by shiny, thick sheen of recumbent hairs, mostly gold in color. Laterally and ventrally hairs silver and less numerous. Along posterior of each tergite about ten short-to-moderately sized, evenly spaced bristles. Petiole with silver sheen on anterior-dorsum and dorsum, mixed with long bristles dorsally, less pilose and nearly bare on the posterior. Sculpturing: Head and pronotum with fine pits becoming whorls on remainder of the body and legs.

PARATYPE WORKERS: TL 3.90–4.50, HL 1.20–1.38, HW 1.18–1.35, CI 92–104, SL 1.45–1.60, SI 117–125, PW 1.03–1.13, ML 0.40–0.53.

**Similar species:** The only species I have found with similar proportions, especially in the steep propodeal declivity, lack the thick layer of recumbent hairs. I have seen *Camponotus* with numerous golden hairs among unidentified species from Indonesia, but they are too gracile to be this species.

**Etymology:** *Flavicomans* is Latin for “golden haired,” the most visible and distinct feature of this species.

**Type locality:** Babelthuap Island and nearby sections of Koror Island, Republic of Palau, Western Pacific.

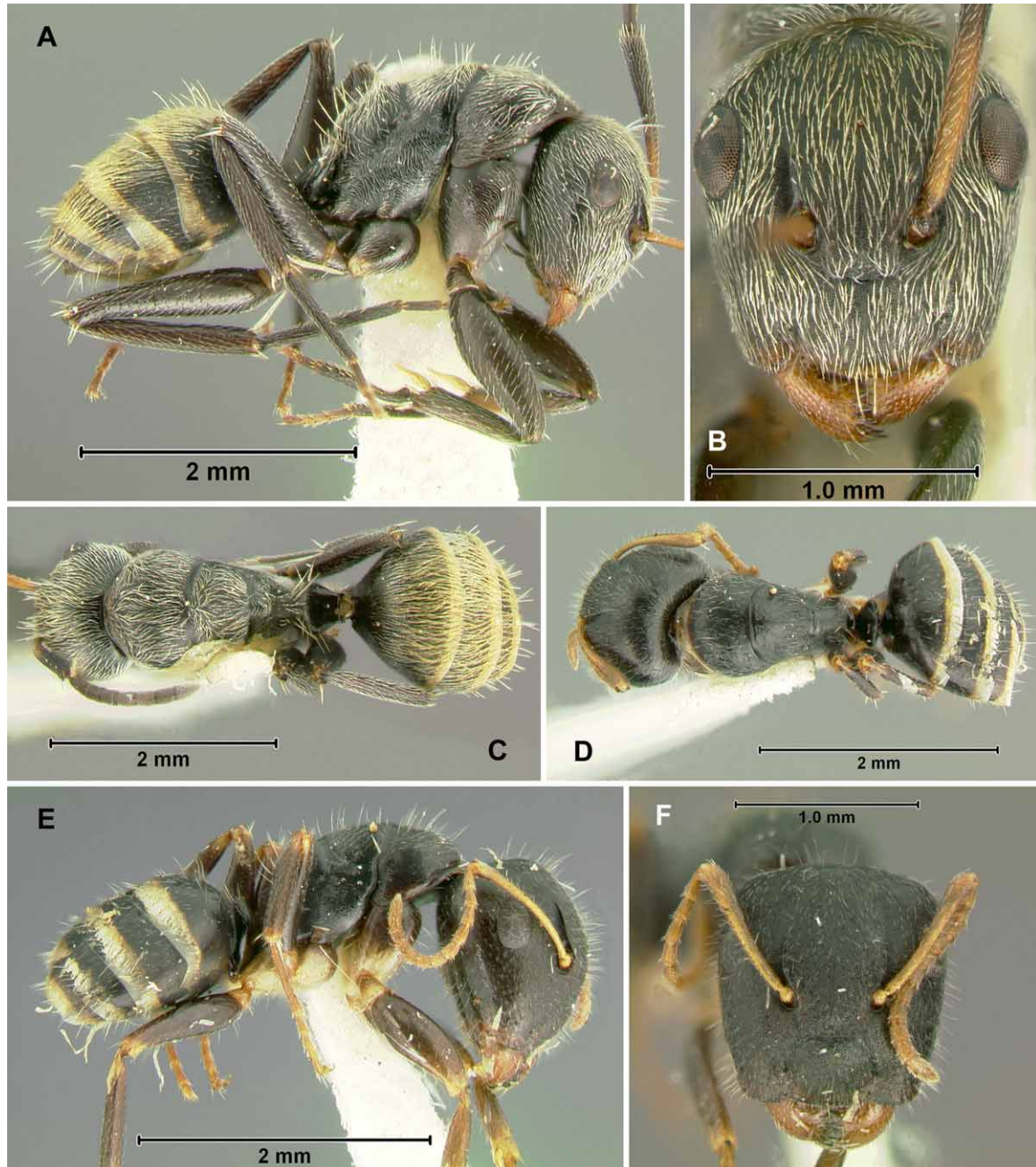
**Type series:** Holotype worker: Palau: Babelthuap I., “Ngiwal-Ngarard” (Esaki, 6-II-1938). Paratype workers (5): Palau: Babelthuap I., (Oakley, 22-VII-46, NMNH); Babelthuap I., Gakip (“1256,” Townes, 19-VII-46, NMNH); NE corner of Koror (“1260,” Townes, 22-VII-46, NMNH).

### ***Camponotus marianensis* n. sp.**

Plates 2D–F, 3A

HOLOTYPE WORKER: TL 2.75, HL 1.32, HW 1.22, CI 92, SL 0.92, SI 75, PW 0.85, ML 0.35. Mandible outer margin strongly curving to a sharp apical tooth that points parallel to anterior clypeal margin. Anterior clypeus extending past mandibular insertions and very slightly convex across. Median clypeus curved slightly away from vertex, antennal insertions separated from clypeus by distance almost equal to the distance from nearest clypeal margin to clypeal midpoint. Head nearly square in front view. In frontal view, bottom margin of eyes located at halfway point of the head, their inner margins more than halfway from frontal lobes to sides of the head, their outer margins separated from sides of head by less than scape width. Antennae 12-segmented, last segment almost as long as preceding two. Scape extending beyond vertex by distance equal to first segment of the funiculus. Mesosoma in profile sloping gently from anterior pronotum to dorsal propo-

deum, then dropping severely, making concave posterior surface. Petiole three times taller than long, anterior and posterior faces mostly parallel although node slightly bulging dorsally. Color: Body generally mahogany to black. Gaster with grey stripes caused by a translucent strip at posterior of each tergite. Head warm, brownish black, antennae and mandibles completely orange. Legs mahogany, fading to orange at tarsi. Coxae mahogany proximally, switching to white halfway toward the femur. Pilosity: Body covered with scattered, thin, light-colored, standing hairs of various lengths, interspersed with silver recurved hairs. Pilosity predominantly on dorsal mesosoma, petiolar node, and all over head. Sculpturing: Head with fine punctures, becoming fingerprint-like whorls on mesosoma, legs, petiole, and gaster.



**PLATE 2.** *Camponotus flavicomans* n. sp. A–lateral, B–frontal, C–dorsal; *Camponotus marianensis* n. sp. D–dorsal, E–lateral, F–frontal

PARATYPE WORKERS: TL 2.75–3.00, HL 1.05–1.27, HW 0.95–1.27, CI 90–101, SL 0.87–1.10, SI 74–105, PW 0.70–0.93, ML 0.37–0.47. Similar to holotype except heads more square in some and scapes extending beyond vertex by distance equal to the first two funicular segments in some.



**Similar species:** Dark, thick-headed *Camponotus* species are not uncommon, and this species does closely resemble *C. sachalinensis* (Forel 1904), which is found in Japan. However, not only is that species overall black, including the appendages, but it also lives in mountainous regions of northern Japan, making it an unlikely candidate to colonize the Marianas. Also from Japan, *C. japonicus* Mayr 1866 appears very similar, but its propodeal declivity is not as steep and it, like *C. sachalinensis*, is monochrome black. *Camponotus marianensis* **n. sp.** does resemble some identified specimens from Indonesia, but it can be primarily distinguished by its coloration and secondarily by its squarish head shape, small eyes, wide mesosoma, and propodeal profile.

**Etymology:** This species is named for the Mariana Islands, the only place where it has been collected to date.

**Type locality:** The holotype worker was collected at Afetna Point on Saipan I., a member of the Commonwealth of the Northern Marianas Islands (CNMI). Paratype workers were collected on the islands of Tinian and Rota (also in CNMI).

**Type series:** Holotype worker and one paratype worker: Mariana Is.: Saipan I., Afetna Pt. (“No. 1026,” Townes, 1-VII-1946, NMNH). Other Paratypes (11): Mariana Is.: Rota I., Sabanna Monument (Bourquin, 2002); Tinian I. (“No. 493,” Townes, 6-VI-1946, NMNH)

### ***Camponotus peleliuensis* n. sp.**

Plates 3B–D

**HOLOTYPE WORKER:** TL 4.80, HL 1.67, HW 1.50, CI 90, SL 1.17, SI 78, PW 1.07, ML 0.63. Mandible outer margin strongly curving, apical tooth pointing back toward other mandibular insertion. Clypeus no lower than mandibular insertions, slightly concave across. Median clypeus dipping to point away from the vertex, medial carina on frons distinct but not past frontal lobes. Antennal insertions separated from clypeus by distance slightly more than distance from the insertions to medial carina. Head square in front view, tapering slightly toward mandibular insertions, flat across vertex. Midpoint of eyes located down from the vertex one third the distance from the vertex to the mandibular insertions, their outer margins separated from the sides of the head by a distance less than width of distal scape. Antennae 12-segmented, scape extending beyond vertex by 1/6 their length. Mesosoma broad and shallow in profile, sloping from anterior pronotum to the posterior propodeum, having a slight metanotal groove and promesonotal suture, and distinct but slight propodeal declivity. Petiole only as tall as long, anterior edge rising same distance as peduncle length, then sloping up for a distance slightly less than height of posterior face. **Color:** Overall dark reddish brown, grading to orange brown at distal coxae, proximal scapes, and anterior head; mandibles concolorous orange. Gaster with distinct, grey stripes made by clear strips on each posterior tergite; strips as wide as width of hind tibia. **Pilosity:** Head, mesosoma, and gaster with layer of fine, recumbent, silver hairs, interspersed with long, standing hairs. Head with long hairs on frons, central clypeus, and below eyes and around mandibular insertions. Standing hairs vary in height, but pair closest to vertex as long as the maximum width of eyes. Mesosoma with three to four long hairs each on the pronotum, mesonotum, and propodeum. Petiolar node with four long, backward-pointing hairs arranged in two pairs, one on each side of highest point; inner hairs slightly shorter than outside ones. Each gastral tergite with about ten long, silver hairs immediately anterior to grey strip on posterior edge. In addition, two adjacent pairs of long hairs lie in a line along middle of each tergite. **Sculpturing:** Head covered with distinct but fine punctures; body with delicate whorls.

**PARATYPE WORKERS:** TL 4.30–4.70, HL 1.10–1.30, HW 1.13–1.20, CI 87–106, SL 1.20–1.33, SI 97–118, PW 0.87–0.93, ML 0.40–0.50. Although the holotype worker is the oldest and best curated specimen, it is a major worker and differs from the more common minors in certain key respects. Coloration of minors more overall matte back, which contrasts more sharply with orange proximal scapes and mandibles. Head

entirely black, except for small area around mandibular insertions. Pilosity of head in minors lacking long, thick hairs between eyes and mandibular insertions. Head more tapered than holotype, and scapes longer.

**Similar species:** As with *C. marianensis* above, this thick-headed, dark species has many similar forms in the region. However, its squat petiole is the first point of departure from most other species, including *C. japonicus* Mayr 1866. Other features of *C. peleliuensis* that distinguish it are its square head in front view, lack of pilosity, smoothly curving dorsal mesosomal profile, and coloration.

**Etymology:** This species is named for its only known locality, Peleliu Island. It is dedicated to the U.S. Marine and Infantry soldiers who fought there in one of WWII's most horrific battles. Indeed, the holotype was collected from the 13 km<sup>2</sup> island less than a year after it was the scene of over 12,000 combat deaths.

**Type locality:** Peleliu Island, the Republic of Palau

**Type series:** Holotype worker: Palau: Peleliu I. ("45-10658," Dorsey, Summer 1945, NMNH). Paratype workers (5): Palau: Peleliu I. ("No. 1285," Townes, 23-VII-46, NMNH)

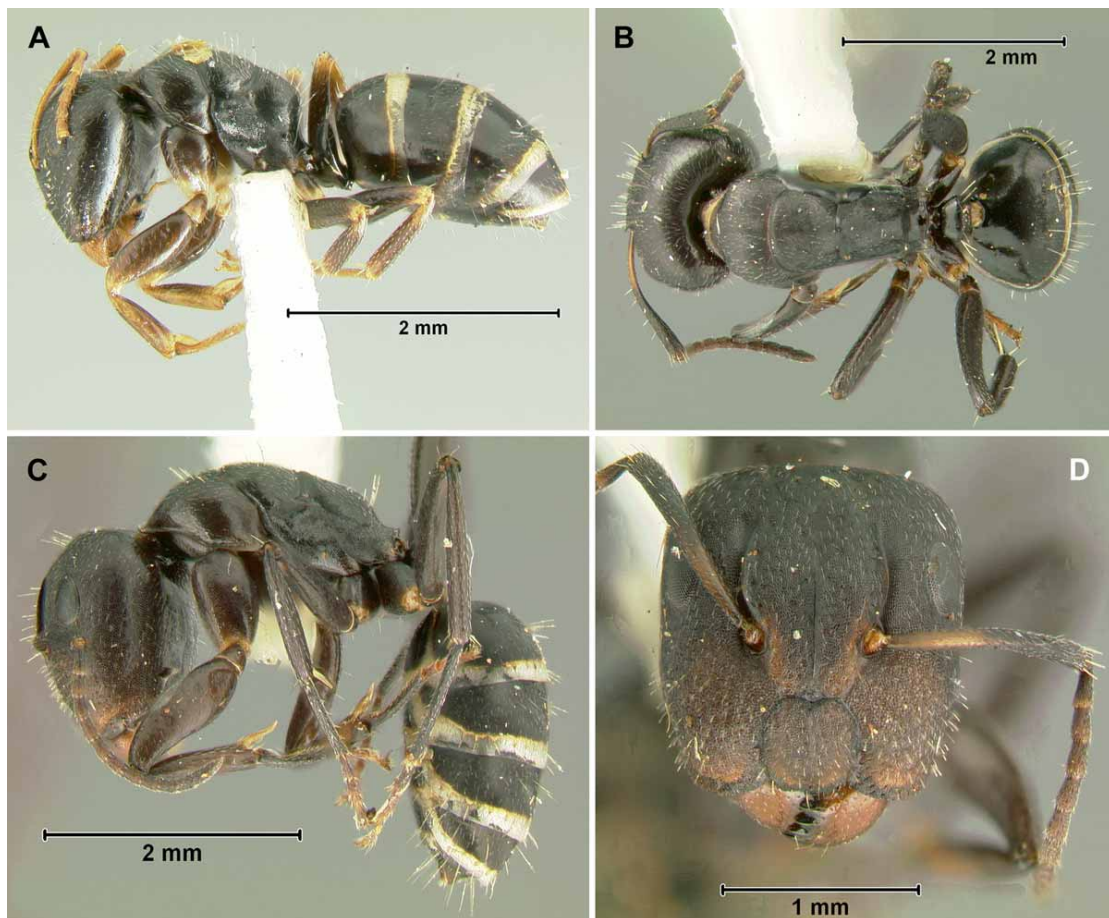


PLATE 3. *Camponotus marianensis* n. sp. paratype A-lateral; *Camponotus peleliuensis* B-dorsal, C-lateral, D-frontal

### Subfamily Myrmicinae

#### *Pheidole recondita* n. sp.

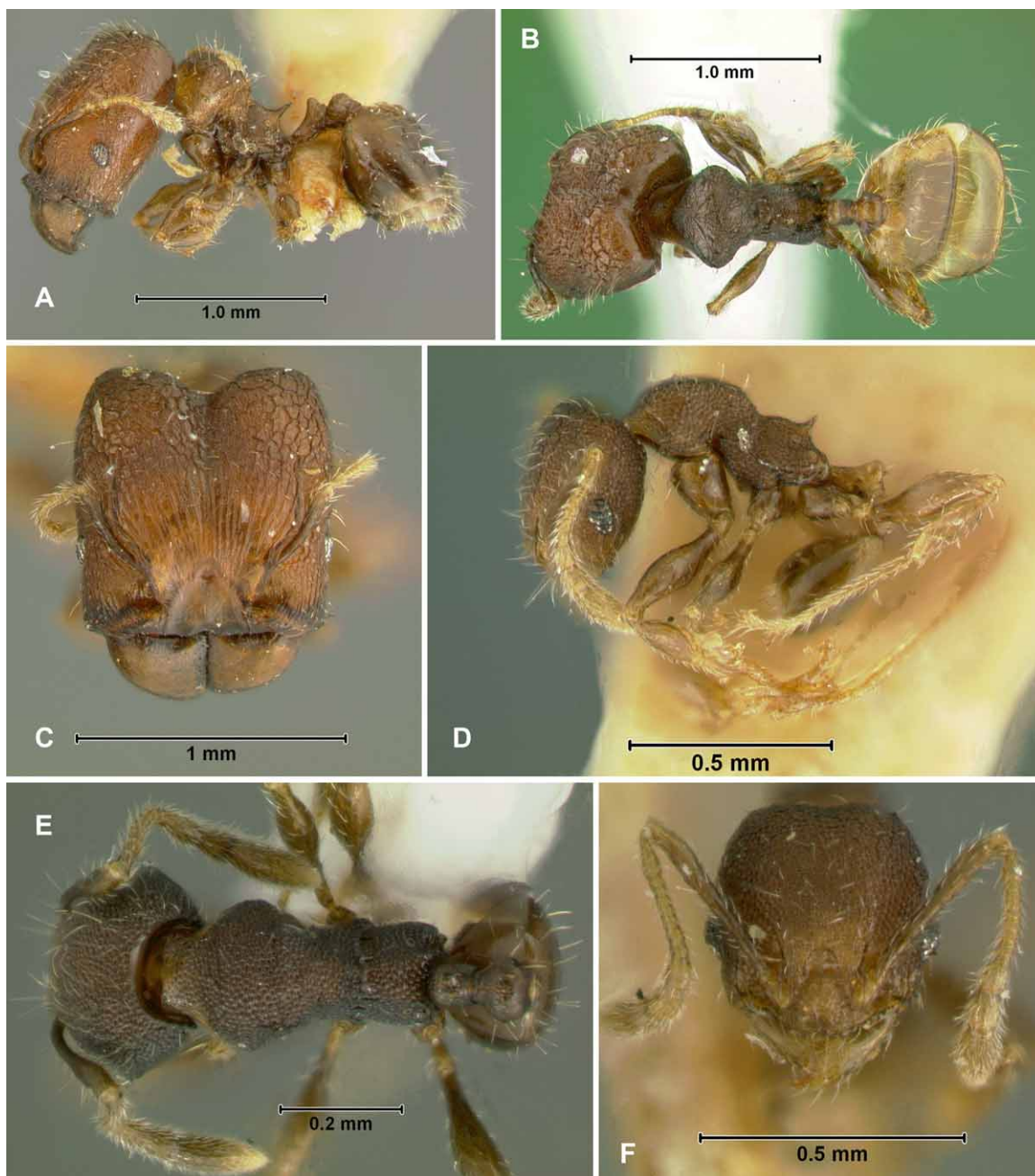
Plate 4

HOLOTYPE MAJOR WORKER: TL 2.33, HL 1.02, HW 0.98, CI 97, SL 0.40, SI 41, PW 0.55, ML 0.45. Outer mandibles curved at right angles, apical margins parallel to each other and perpendicular to anterior clypeus. Apical margins worn in holotype but paratype with teeth, described below. Anterior clypeus concave centrally, median clypeus extending to level of antennal insertions, depressed from surface at highest point.

Head mostly square, bilobed at vertex. Eyes lateral, at level slightly higher than halfway up scapes. Frontal lobes hiding antennal insertions, scrobes distinct, extending slightly beyond reach of scapes. Antennae 13-segmented, three-segmented club equal in length to remaining funiculus, terminal segment same length as preceding two combined. Promesonotum bulbous in profile, meeting dorsal propodeum at right angle, extended laterally. Propodeal spines as long as height of posterior propodeum, spiracle round and prominent. Petiole angled up from long peduncle, anterior height equal to dorsal length of peduncle. Postpetiole slightly shorter than petiole but expanded to greater width laterally. Color: Overall blackish brown fading to orange at legs and distal scapes through funiculus. Especially blackish at mandibular margins, head along mandibular insertions, proximal scapes, mesepisternum, metepisternum, and posterior gastral tergites. Pilosity: Front of head, vertex, dorsal promesonotum, dorsal petiole and postpetiole, and dorsal gaster with scattered, long, curved, light hairs, especially long and curved on the promesonotum. Sculpturing: Distinguished by extensive puncturing on head, mesosoma, petiole, and postpetiole, even among striae and reticulations; puncturing missing from clypeus, between antennal insertions, and patches on the lateral pronotum, mes- and metepisterna. Reticulate sculpturing at vertex sharp and wide, becoming more linear and losing intermingled punctures at top of scrobes, and ending as linear striae from the middle of the scrobes to the median clypeus. Reticulations continuing down sides of head, becoming more linear around eyes but less distinct among punctures between eyes and antennal insertions, ending in fine linear sculpturing in front of mandibular insertions. Scrobes lined with punctures only. Clypeus and mandibles smooth. Promesonotum covered in loose rugae mixed with punctures, becoming predominated by punctures laterally and between propodeal spines. Lateral pronotum directly under lateral pronotal extensions, mesepisternum, and metepisternum each with glossy area free from punctures and rugae. Petiole and postpetiole with weaker sculpturing, mostly seen as punctures on dorso-lateral peduncle. Gaster smooth but not glossy.

PARATYPE MAJOR WORKERS: TL 2.32–2.80, HL 0.87–1.12, HW 0.87–1.07, CI 92–100, SL 0.35–0.45, SI 40–47, PW 0.45–0.58, ML 0.45–0.53. As with holotype major worker except: Mandibles not as worn, with two apical teeth and hint of a basal tooth, with a gently concave, edentate surface between them. Apical tooth larger than penultimate. CI increases and SI decreases in smaller individuals, seen in paratype from same collection as holotype and paratypes from Rota. Pohnpeian paratypes largest. More recently collected specimens more blackish than holotype and paratype from same collection as holotype. Punctures visible between linear striae between antennal insertions.

PARATYPE MINOR WORKERS: TL 1.00–1.16, HL 0.40–0.46, HW 0.40–0.45 CI 98–105, SL 0.34–0.43, SI 83–96, PW 0.26–0.28, ML 0.22–0.25. Mandible outer margin angled straight in to center, ending with a long, backward-curving apical tooth, followed by a second tooth of about half length, then six irregular and often indistinct denticles along apical margin. Frontal lobes not hiding torulus, scrobes absent. Eyes lateral and bulging, slightly below midlevel of head. Vertex concave. Scapes extending beyond vertex by distance less than first segment of funiculus. Mesosoma humped in profile, promesonotum meeting dorsal propodeum at 120 degree angle. Propodeal spines similar in length to height of posterior propodeum and length of petiolar peduncle. Peduncle straight dorsally, bulging ventrally. Petiolar node taller than postpetiole, which is expanded gently laterally. Color: Body blackish brown to brownish black, becoming orange at funiculus, mandibles, and legs. Pilosity: Many fewer hairs than majors, except for clypeus, mandibles, and antennae, which have numerous, long, standing, silver hairs. Sculpturing: Head (including clypeus), mesosoma, and dorsolateral peduncle covered with deep, numerous, and evenly distributed punctures. Hints of linear sculpturing on clypeus, between eyes and antennal insertions, and bordering mesepisternum.



**PLATE 4.** *Pheidole recondita* n. sp., major: A–lateral, B–dorsal, C–frontal; minor D–lateral, paratype E–dorsal, F–frontal

**Similar species:** *Pheidole recondita* n. sp. is one of three extremely small, punctured *Pheidole* in Micronesia and Melanesia, the other two being *P. nindi* Mann 1919 and *P. philemon* Forel 1910a. Although the three majors are quite easily distinguished, the minors are extremely similar and difficult (but not impossible) to distinguish without associated majors. *Pheidole recondita* n. sp. and *philemon* majors are distinguished from *nindi* by their long frontal lobes: in *nindi*, linear sculpturing on the frons gradually blends with punctures that lie under the scapes, whereas in *recondita* and *philemon*, the two types of sculpturing are distinct and separated by a continuation of the frontal lobes along the length of the scapes. *Pheidole recondita* and *philemon* majors are distinguished from each other by the sculpturing of the mesosoma, which is generally more punctate in *recondita*. Although punctured, *philemon* is mostly covered with reticulate sculpturing or rugae which become fine transverse ridges on the dorsal pronotum and fade to smooth surface along the lateral mesosoma; *recondita* has irregular rugae that continue down the sides of the mesosoma, except for distinct, small patches

on the lateral pronotum, mes- and metepisterna. A character that is extremely useful to distinguish these three species—even the minors—is their coloration: *nindi* ranges from light orange to reddish brown, *recondita* ranges from blackish orange to blackish brown (always with a blackish or ashy appearance), and *philemon* is bicolored, with a dark brown gaster and ventral petiole and postpetiole and light orange head, mesosoma, and dorsal petiole and postpetiole. Other than color, the minors can be distinguished as follows: *nindi* and *recondita* have straight, triangular propodeal spines, while *philemon* has spines which curve slightly downward; *philemon* is smoother on the dorsal promesonotum than the other two species, and it has slight transverse rugae on the dorsal mesonotum (*nindi* and *recondita* are both heavily punctate over the entire mesonotum); and the dorsal propodeum in *recondita* is short and convex relative to *nindi*, which has a relatively long, flat propodeum posterior to a slight anterior rise.

**Etymology:** *Recondita* is Latin for “mysterious,” as is this uncommon little ant. The fact that it has been collected from three different areas in Micronesia (Kosrae, Pohnpei, and the Marianas) suggests that it is a good disperser, but its absence from collections outside Micronesia make it one of only two species that currently stand as Micronesian endemics found on more than one island. The other one, *Metapone truki* Smith, M.R., 1953 from Chuuk and Palau, is currently believed to be a junior synonym of a described species widely found on New Guinea (R. W. Taylor, pers. comm.), thus making *P. recondita*’s distribution potentially unique.

**Type locality:** Micronesia, from Guam Island and Rota Island in the Mariana archipelago, and Pohnpei Island of the Caroline Islands. (Non-types have been examined from Kosrae Island, also in the Carolines.)

**Type series:** Holotype major worker: Mariana Is.: Guam I., Yigo (Swezey, 18-X-1936). Paratype workers (4 majors associated with 12 minors): FSM, Pohnpei: Pohnpei I.: Mt. Nahnalud Cave (under moss on tree around camp, collected by hand, Clouse, 24-III-2000); Mariana Is.: Guam I., Yigo (Swezey, 18-X-1936); Rota I. (litter, shaded valley, Bourquin, 15-XI-2002);

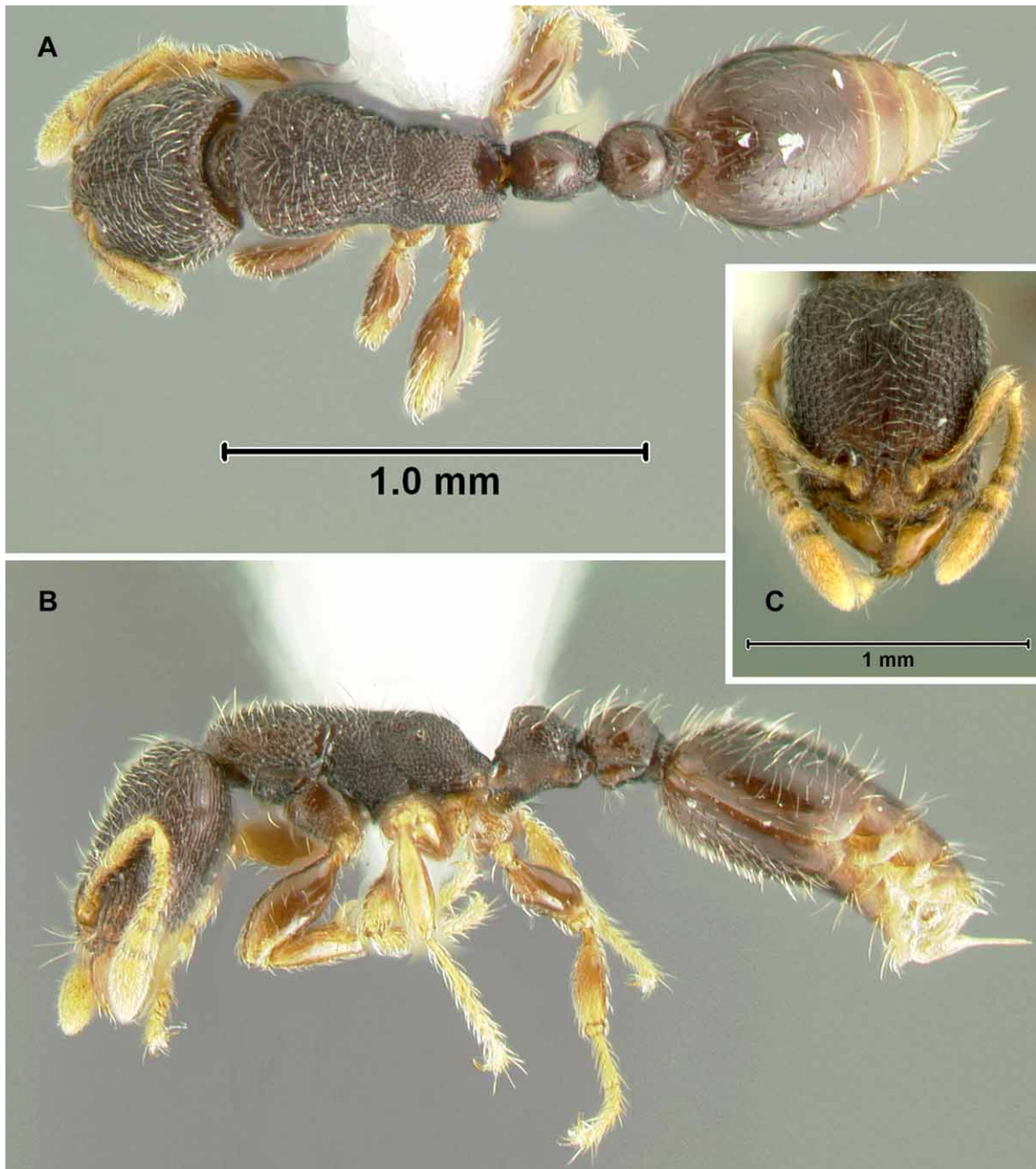
Collections of minors examined (not made paratypes): FSM Kosrae I.: Mt. Mutunte (580 m, duff from forest floor; KU 58 B, Clarke, 11-II-1953); FSM Pohnpei: Pohnpei I., Mt. Nahnalud (collected by Berlese funnel from moss, Clouse, 10-IX-2000); Mariana Is.: Anatahan I. (pitfall, mid-altitude forest, Bourquin, 2-IV-2002); Anatahan I. (pitfall, mid altitude forest, Bourquin, 26-IV-2002)

### ***Vollenhovia kaselela* n. sp.**

Plate 5

HOLOTYPE WORKER: TL 2.00, HL 0.54, HW 0.45, CI 84, SL 0.31, SI 69, PW 0.35, ML 0.25, PL 0.21, DPW 0.17, PWI 81, PPL 0.20, PPW 0.19, PPWI 95. Mandible outer margin straight, curved at apical tip. Masticatory margin with six teeth, apical and penultimate teeth sharp, remaining four teeth blunter, decreasing in size basally. Head roughly rectangular, tapering slightly toward mandibles, median vertex concave. Eyes lateral, upper margin of eyes at mid-level of head. Antennae 12-segmented with indistinct, three-segmented club; first segment of club three times as large as previous, second segment of club 80% larger, and terminal antennal segment twice as large as penultimate. Frontal lobes not hiding torulus completely, stopping at insertions. Mesosoma nearly flat in profile, trace of metanotal groove, gently sloping at propodeal declivity but with small latero-dorsal corners. Propodeal lobes extending nearly halfway up declivity and posteriorly the same distance. Petiole (not including keel) roughly cylindrical, anterior node rising vertically, with small tooth in profile at location of spiracle then sloping up to dorsal surface; tapered dorsally, ridged around posterior socket. Peduncle indistinct. Ventral petiolar keel constituting one fifth total petiolar height, anterior edge vertical, dorsal edge sloping up at about 45 degrees to point just anterior to postpetiolar insertion; lower extreme of keel translucent. Postpetiole globular, ventral edge concave, with lip ventrally at petiolar juncture. Gaster elliptical, 80% covered by first tergite. Color: Most of head, mesosoma, petiole, postpetiole, gaster, forecoxae, and femora blackish brown; mandibles, clypeus and anterior head around mandibular insertions, and remain-

der of legs orange-brown. **Pilosity:** Mostly covered with mixture of long, straight, standing hairs and short hairs curved back to the body surface. Clypeus with two long, straight hairs immediately below antennal insertions, pointing toward midline. Hairs on face shorter and more depressed than remainder of body, pointed toward vertical midline. Pilosity on dorsal mesosoma as with head, low and curved toward center, but mixed with a few very long, standing hairs along the dorso-lateral edge. Hairs less numerous but longer on dorsal petiole and postpetiole. Lateral propodeum and mesepisternum as well as lateral and anterior faces of petiole hairless. Dorsal and ventral gaster with curved, short hairs and long, straight ones mixed. Mandibles, antennae, lateral pronotum, and legs with short, curved hairs. **Sculpturing:** Head striae starting immediately above median clypeus, gena with distinct striae but no punctures or hairs. Small smooth patches lacking on dorsal pronotum, mesonotum, or propodeum. Declivity and entire dorsal petiole and postpetiole smooth.



**PLATE 5.** *Vollenhovia kaselela* A–dorsal, B–lateral (same scale bar as A applies), C–frontal

PARATYPE WORKER: TL 1.90, HL 0.55, HW 0.48, CI 86, SL 0.31, SI 66, PW 0.38, ML 0.26, PL 0.23, DPW 0.18, PWI 78, PPL 0.20, PPW 0.20, PPWI 100.

**Similar species:** The only other small *Vollenhovia* species with such extensive punctures and striations on the head is an unidentified specimen from Chuuk Island (Clouse, in press); however, *kaselela* is easily distinguished from it by its larger size and proportionately wider petiolar node. *Vollenhovia kaselela* is also darker, has narrower striations on the gena, more puncturing on the pronotum, and less sculpturing on the dorsal petiolar node than this Chuukese specimen. The Melanesian species *V. subtilis* Emery 1887 also has striate genae but in addition to being redder in color and slightly larger than *kaselela*, is less punctured, being smooth just anterior of the propodeal spiracle and on the dorsal propodeum. The blanket of regular punctures on *Vollenhovia kaselela* is approached in the similarly sized *V. emeryi* Wheeler 1906 (especially its subspecies *cho-senica* Wheeler 1928) and *V. banksi* Forel 1910b subspecies *kuchingensis* Wheeler 1919 from Borneo, but they do not have striate gena.

**Etymology:** *Kaselel* means “beautiful” or “perfect,” in Pohnpeian.

**Type locality:** Pohnpei Island, Federated States of Micronesia

**Type series:** Holotype worker: FSM Pohnpei: Pohnpei I., Nett Municipality, Nanpil (Dybas, 25-II-1948). Paratype worker (1): FSM Pohnpei: Pohnpei I., PATS (walking on rotten log, collected by hand, 21-III-2000, Clouse)

### *Vollenhovia mwereka* n. sp.

Plate 6A–C

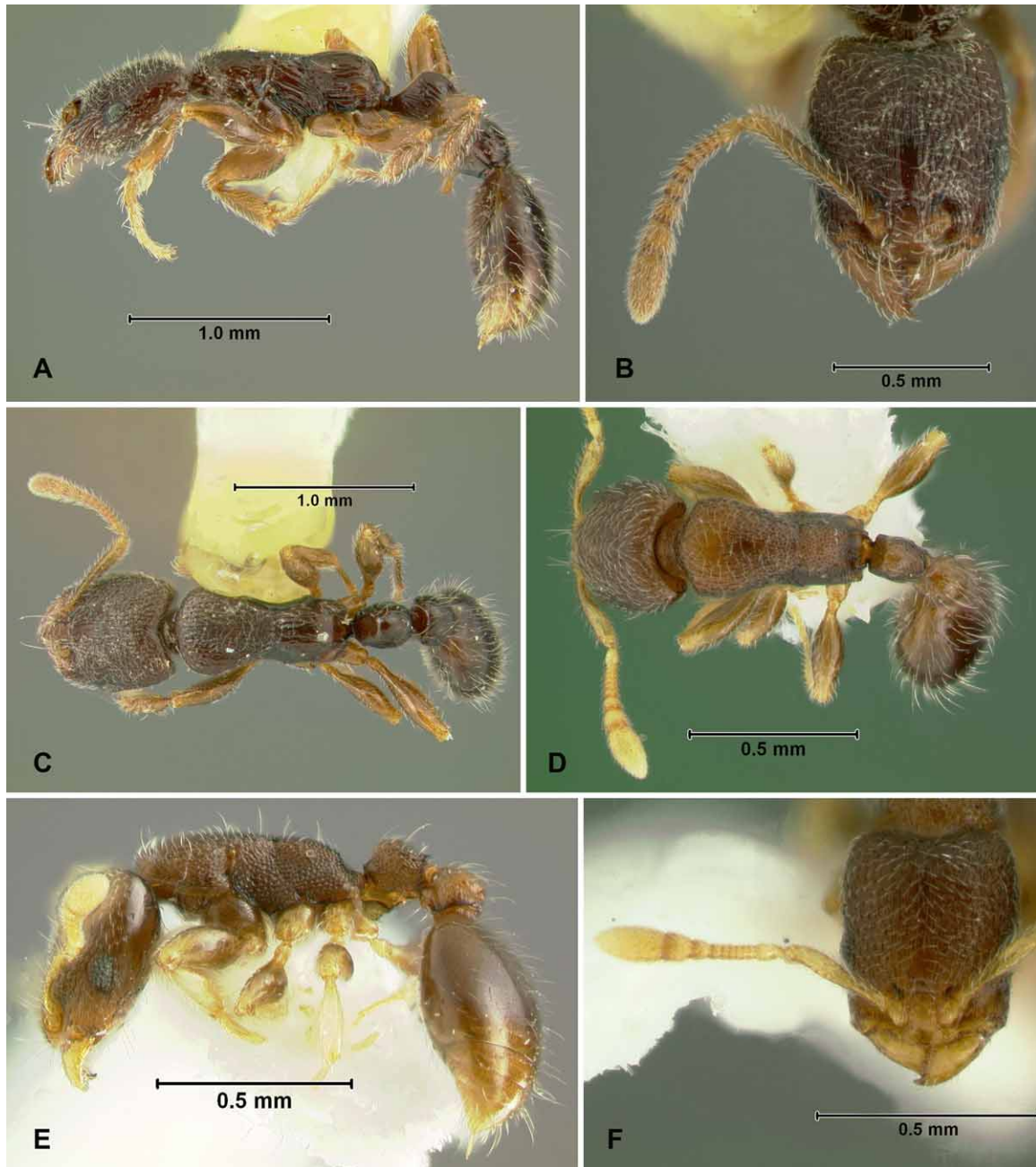
HOLOTYPE WORKER: TL 2.60, HL 0.76, HW 0.68, CI 89, SL 0.53, SI 78, PW 0.51, ML 0.38. Outer edge of mandibles mostly straight, becoming angled then strongly curved at apex. Penultimate apical tooth slightly smaller than apical and nearer it than third tooth. Six full teeth visible along apical margin with mandibles closed, the basal four decreasing only slightly in size. Anterior clypeus convex and angled. Medial clypeus elevated to level of upper torulus, surface distinctly raised. Head heart-shaped, with vertex distinctly concave. Eyes lateral and slightly below the midpoint of the head. Antennae 12-segmented, segments of funiculus increasing in size dramatically but evenly. Scapes not reaching vertex, even at midpoint. Frontal lobes not completely hiding torulus nor extending beyond insertions, scrobes absent. Dorsal mesosoma in profile nearly flat, angled down slightly at metanotal groove. Anterior pronotum rising nearly vertically. Propodeum gently curved at 120-degree angle, with propodeal lobes in lower third. Propodeal spiracle below dorsal edge by 1/6 propodeal height, in just barely in anterior half. Petiole and postpetiole (best seen in paratype) both with nearly vertical anterior faces, similar in height, rounded dorsally. Ventral keel of petiole small, almost completely under peduncle. Ventral postpetiole swollen anteriorly, resembling ventral keel in profile. Postpetiole expanded anterior-laterally, wider than petiole, tapering posteriorly. Gaster oval in profile, 90% covered with first tergite. Color: Overall deep reddish brown, mandibles, antennae, and legs orange. Pilosity: Head, mandibles, antennae, legs, anterior pronotum, with dense covering of curved, standing, light-colored hairs. Hairs decreasing in number but longer on posterior dorsal mesosoma, and dorsal petiole and postpetiole. Lateral mesosoma mostly smooth, hairs only on lateral pronotum, around coxae and bulla. Hairs on gaster long and dense dorsally, first sternite with brush of short, straight, standing hairs centrally. Sculpturing: Head to postpetiole covered with deep, rounded rugae. Head sculptured on both front and back, finer than rest of body, mixed with punctures. Mandibles, clypeus, and lower central frons smooth. Mesosoma with fine linear rugae on anterior dorsal pronotum, becoming wider and softer laterally and posteriorly, posterior propodeum smooth. Petiole and postpetiole with wide, shallow rugae except on anterior and posterior faces, which are smooth. Gaster smooth except for punctures associated with brush on first tergite.

PARATYPE WORKER: TL 2.50, HL 0.76, HW 0.65, CI 85, SL 0.50, SI 77, PW 0.48, ML 0.36.

**Etymology:** *Mwerek* means “wrinkled” in Pohnpeian, an adjective that captures the visual effect created by this species’ covering of rugae. This species appears to be endemic to Pohnpei Island, and its name contains a distinctly Pohnpeian consonant, “mw,” which is found in odd locations for English speakers and in such common words as *mwahmw* (fish) and *mwahu* (good).

**Type locality:** Pohnpei Island, Federated States of Micronesia

**Type series:** Holotype worker: FSM Pohnpei: Pohnpei I., Mt. Nahnalaud (Adams, June–Sept 1950). Paratype worker: FSM Pohnpei: Pohnpei I., Mt. Nahnalaud (Adams, June–Sept 1950)



**PLATE 6.** *Vollenhovia mwereka* n. sp. A–lateral, B–frontal, C–dorsal; *Vollenhovia pwidikidika* n. sp. D–dorsal, E–lateral, F–frontal



***Vollenhovia pwidikidika* n. sp.**

Plate 6D–F

**HOLOTYPE WORKER:** TL 1.48, HL 0.50, HW 0.40, CI 80, SL 0.27, SI 68, PW 0.30, ML 0.16, PL 0.18, DPW 0.13, PWI 72, PPL 0.15, PPW 0.15, PPWI 100. Mandible outer margin straight, curved at apical tip. Masticatory margin with five teeth, decreasing in height from apex, distinct diastemata between basal three. Anterior clypeus angled down to central tip, median clypeus elevated to upper level of antennal insertions. Head rectangular, slightly tapering toward mandibles, median vertex concave. Eyes lateral, upper margin of eyes at mid-level of head. Antennae 11-segmented with distinct three-segmented club; first segment of club twice as large as previous, second segment of club 25% larger, and terminal antennal segment three times as large as previous. Frontal lobes small, not completely hiding torulus, stopping at insertions. Mesosoma nearly flat in profile, hint of metanotal groove, gently sloping at propodeal declivity but with small latero-dorsal corners. Propodeal lobes large, nearly halfway up declivity and extending posteriorly the same distance. Petiole (not including keel) cylindrical, anterior face of node nearly vertical, small tooth in profile at location of spiracle, then angled up to dorsal surface; tapered dorsally and ridged around posterior socket. Peduncle indistinct. Ventral petiolar keel large, constituting one third total petiolar height, dropping vertically at anterior, then sloping up at 60 degrees to point just anterior to postpetiolar insertion, lower extreme of keel with distinct, translucent area distinctly thinner than remainder of keel. Postpetiole lobular, anterior edge concave, with lip ventrally at petiolar juncture. Gaster elliptical, 80% covered by first tergite. **Color:** Most of head, mesosoma, petiole, postpetiole, gaster, forecoxae, and femora orange-brown; anterior mesepisternum and posterior dorsal petiole black; mandibles, clypeus and anterior head around mandibular insertions, and remainder of legs yellow-orange. **Pilosity:** Covered mostly in a mixture of long, fairly straight, standing hairs and short hairs curved back to the body surface. Clypeus with two long, straight hairs immediately below antennal insertions. Hairs on face shorter and more depressed than remainder of body, pointed toward vertical midline. Pilosity on dorsal mesosoma similar to head, low and curved toward center, but mixed with a few very long, standing hairs along the dorso-lateral edge. Hairs becoming fewer and longer on dorsal petiole and postpetiole. Lateral propodeum and mesepisternum hairless, as are lateral and anterior faces of petiole. Dorsal and ventral gaster with mixture of curved, short hairs and longer, straighter ones. Mandibles, antennae, lateral pronotum, and legs with short, curved hairs. **Sculpturing:** Head with fine striae among large punctures. Striations absent above median clypeus almost to vertex, punctures continuing to underside of head, but gena smooth, hairless, and glossy. Lateral mesosoma with hints of rugae toward anterior, but mostly covered in dense, deep punctures, even on declivity. Petiole similarly punctured, postpetiole with irregular rugae and punctures. Small smooth patches located in very center of dorsal pronotum, mesonotum, propodeum, and petiole. Gaster smooth.

**PARATYPE WORKERS:** TL 1.54–1.58, HL 0.47–0.50, HW 0.37–0.41, CI 79–82, SL 0.26–0.27, SI 66–70, PW 0.29, ML 0.19–0.21, PL 0.16, DPW 0.12–0.13, PWI 75–81, PPL 0.15–0.16, PPW 0.16–0.15, PPWI 93–101. Shape and position of translucent area on keel variable, possibly due to wear.

**Similar species:** *Vollenhovia pwidikidika* most closely resembles *V. brachycera* Emery 1914 (originally described as *brevicorne* by Emery in 1893) in size and overall sculpturing, and *brachycera* even appears to have 11-segmented antennae (no mention of antennal segments is made in the *brachycera* description, nor is there a figure). However, *pwidikidika* has an unsculptured strip above the clypeus that continues nearly to the vertex, while *brachycera* has striae in the same location; in addition, *brachycera* has larger, more distinct smooth patches on the dorsal pronotum, mesonotum and propodeum, and *brachycera* lacks punctures for a significant area around propodeal spiracle; *pwidikidika* is also smaller than *brachycera*. In color, shape, and general appearance, *pwidikidika* also resembles *V. kaselela* n. sp. (above), and specimens of both species were treated as one for quite some time. However, the genae, striate in *kaselela* and glossy in *pwidikidika*, are a useful feature for telling them apart.

**Etymology:** *Pwidikidik* is Pohnpeian for “tiny,” and this species is the smallest of all Micronesian species. Indeed, it is one of the smallest *Vollenhovia* yet described. This word demonstrates an attractive feature of Pohnpeian and many other Pacific island languages, which is the melodic repetition of syllables, especially in adjectives (e.g., *reirei* = tall, *lapala* = large, *tikitik* = small, *mororo* = “fat”).

**Type locality:** Ponape Agriculture and Trade School (PATS) farm, Pohnpei Island, Federated States of Micronesia

**Type series:** Holotype worker: FSM Pohnpei: Pohnpei I., PATS (leaf litter among swamp taro, collected by Berlese funnel, Clouse, 20-X-1995). Paratype workers (2): FSM Pohnpei: Pohnpei I., PATS (from leaf litter under pandanus tree, collected by Berlese funnel, Clouse, 20-X-1995)

## Acknowledgements

Dr. Mark Deyrup of Archbold Biological Station (ABS) closely nurtured me in this study, from encouraging my collecting efforts to carefully editing manuscripts. Dr. Betty Ferster, then of ABS, sent the necessary ant-collecting equipment and encouragement to Micronesia. I am indebted to Drs. E. O. Wilson, Robert W. Taylor, and Marion R. Smith for their preliminary work on Micronesian ants. Dr. Jim Wetterer of Wilkes Honors College, Florida Atlantic University, generously shared recent collections from the Marianas that have been made types. Color automontage photos were made with the help of Dr. Gary Alpert of MCZ. Dr. May Okihiro of the Medical Officers Training Program on Pohnpei was a natural and adept ant collector, and she was helped by Dr. Patty Ruze of the same institution, who also provided transportation for collecting trips from Kolonia to Kittiti. The Eperiam family of Einpein Village on Pohnpei were, as mentioned in the description of *Camponotus eperiamorum* **n. sp.**, generous hosts and guides. Mr. Kevin Healy of PATS helped me make Berlese funnels. Mr. Fred Loher of ABS helped locate important literature. Species determinations and specimen loans were done with the help of Mr. Stefan Cover at the MCZ, Dr. Steve Shattuck at ANIC, and Dr. Ted Schultz at NMNH. Dr. James Carpenter of the American Museum of Natural History provided me the space and access to work on my collections there. Dr. Katsuyuki Eguchi inspected my specimens of *Pheidole* and offered many useful observations. Mr. Don Buden of the College of Micronesia-FSM completed a very careful reading and editing of the first draft. Mr. Edward Smith, Dr. John-Peter Pham, and Dr. Alex Kerr gave me lengthy comments on my proposed Latin names. Ms. Joyce Friedenbergh, Messrs. Eoin Treacy, Dan Corrou, and Mike Brady, and other PATS staff joined collecting trips and helped in numerous ways, as did Dr. James Woods, now of The Bermuda Biological Station for Research. Dr. John T. Longino of The Evergreen State College and Drs. Robert W. Taylor and Steve Shattuck kindly reviewed this manuscript and suggested many key edits.

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