The Ants of Fort Benning, Georgia

Based on the workers

Last updated 14 February 2008

by

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This guide contains photos and descriptions of all the species of ants we have collected in four years of research at Fort Benning, Georgia. As of 20 February 2004, we have identified 51 species of ants in 5 subfamilies.

Subfamilies

- Ponerinae
- Pseudomyrmecinae
- Myrmecinae
- Dolichoderinae
- Formicinae

Ponerinae

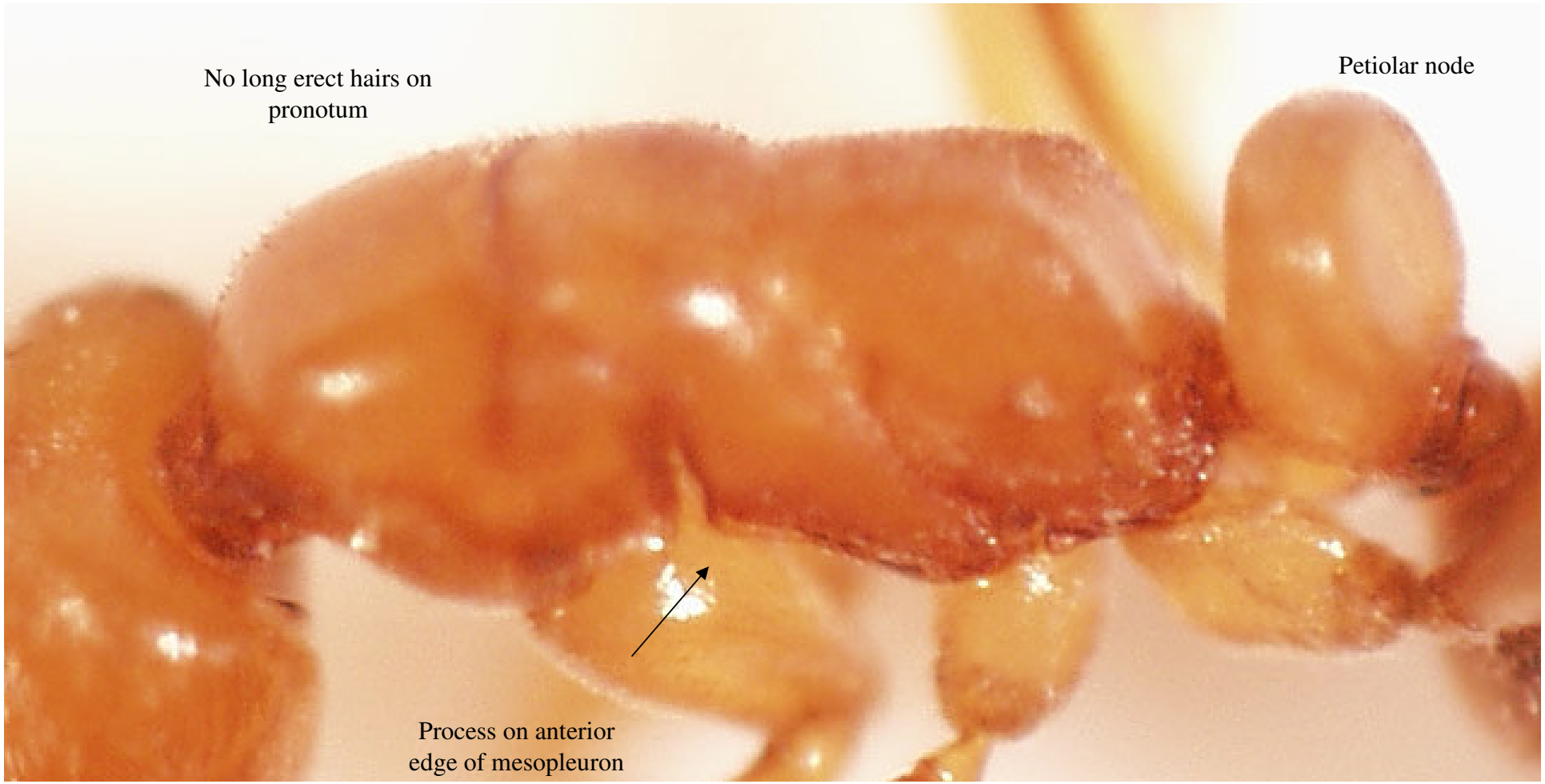
Description: Single segment between alitrunk and gaster. No acidopore. Sting present. Overall body shape is more-or-less cylindrical. Regarded as a primitive group.

Hypoponera inexorata (Wheeler)

Description: Mandible triangular, with 3 or more teeth. Relatively flat alitrunk. No erect hairs on pronotum. Length 2.8 mm. Sally Branch Low (L3), 2002. Keys to Mackay's undescribed species S. In same sample with *Hypoponera opacior*. Widespread, but infrequent in pitfalls.

References: Mackay (2003)

Hypoponera inexorata (continued)



Hypoponera opacior (Forel)

Description: Erect hairs on pronotum. Petiole narrow at apex. Eyes small. Appressed pubescence on gaster abundant. Three specimens at Sally Branch Low (L3) differ in color and pubescence. Length 2.8 mm. Sally Branch Low, 2002. **References:** Mackay (2003)

Hypoponera opacior (continued)

Abundant appressed pubescence

Eyes small, fewer than 15 ommatidia

Proceratium croceum Roger

Description: Single segment between alitrunk and gaster. No acidopore. Sting present. Mandible triangular, with 3 or more teeth. Relatively flat alitrunk. Tiny eyes (less than 15 facets). Petiolar node a thick erect scale, truncate at apex. 4th abdominal sternum relatively long. Larger than *P. silaceum*. Head width greater than 0.75 mm. Color brownish-yellow.

References: Creighton (1950), Brown (1980)

No specimens collected

Pseudomyrmecinae

Description: Two segments between alitunk and gaster. Antennae with 12 segments. Hind tibia with a conspicuous pectinate apical spur. Very large eyes. Only two species in the southeast (*P. brunnea* and *P. pallidus*).

Pseudomyrmex pallidus (F. Smith)

Description: Color clear yellow; gaster may have two brownish spots at the base. Nests is plant cavities, especially in the stems of grasses. *P. brunnea* has blackish brown gaster. **References:** Creighton (1950)

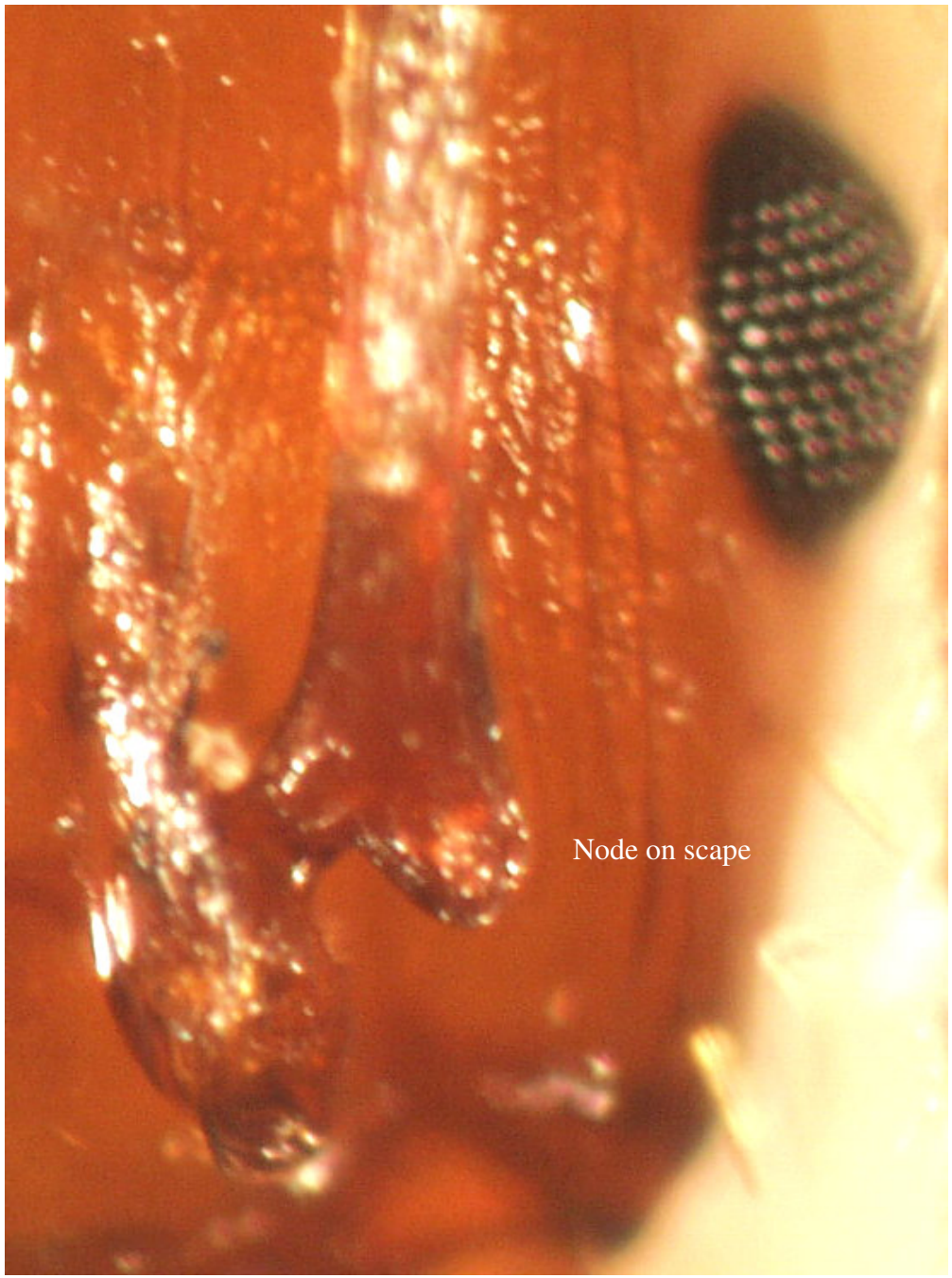
Myrmicinae

Description: Abdominal pedicel in two segments (petiole and postpetiole). Frontal carinae expanded laterally, partially covering antennal insertions. Hind tibia without an apical spur.

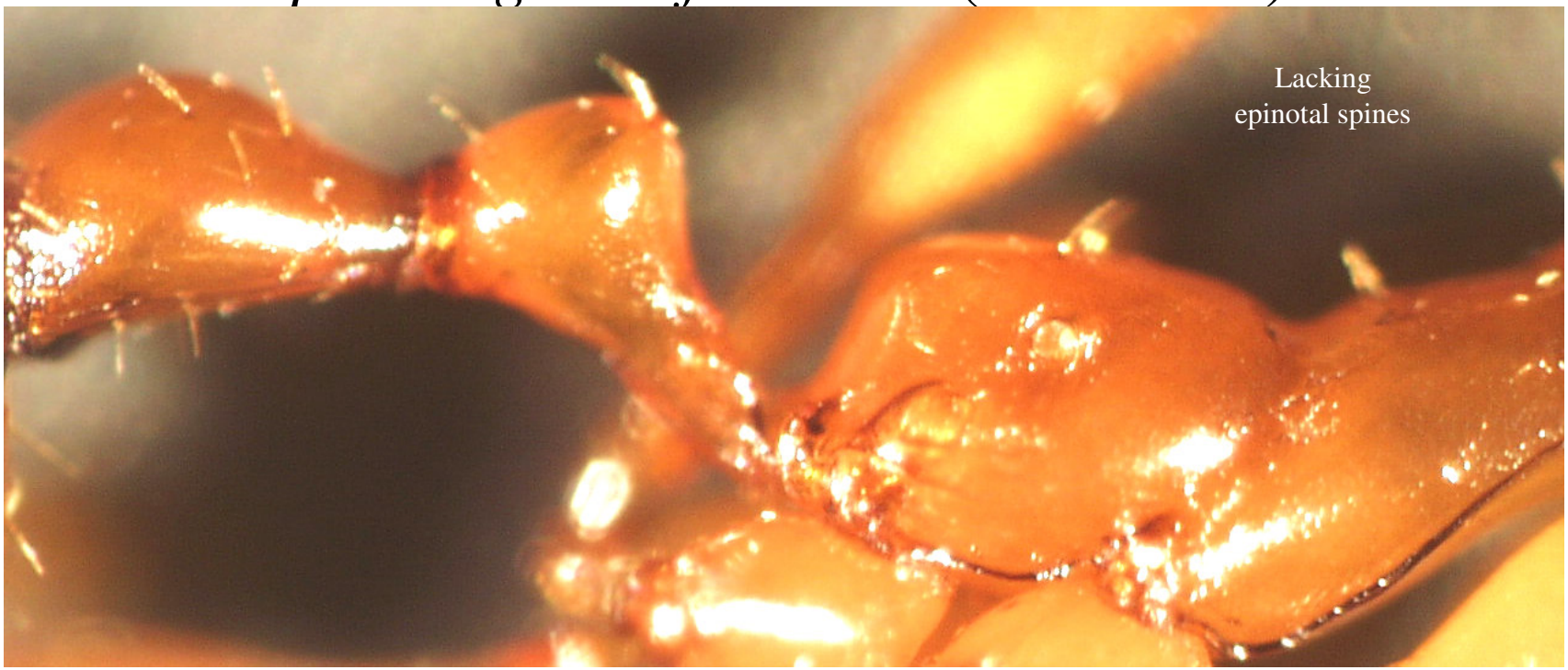
Aphaenogaster floridana Smith

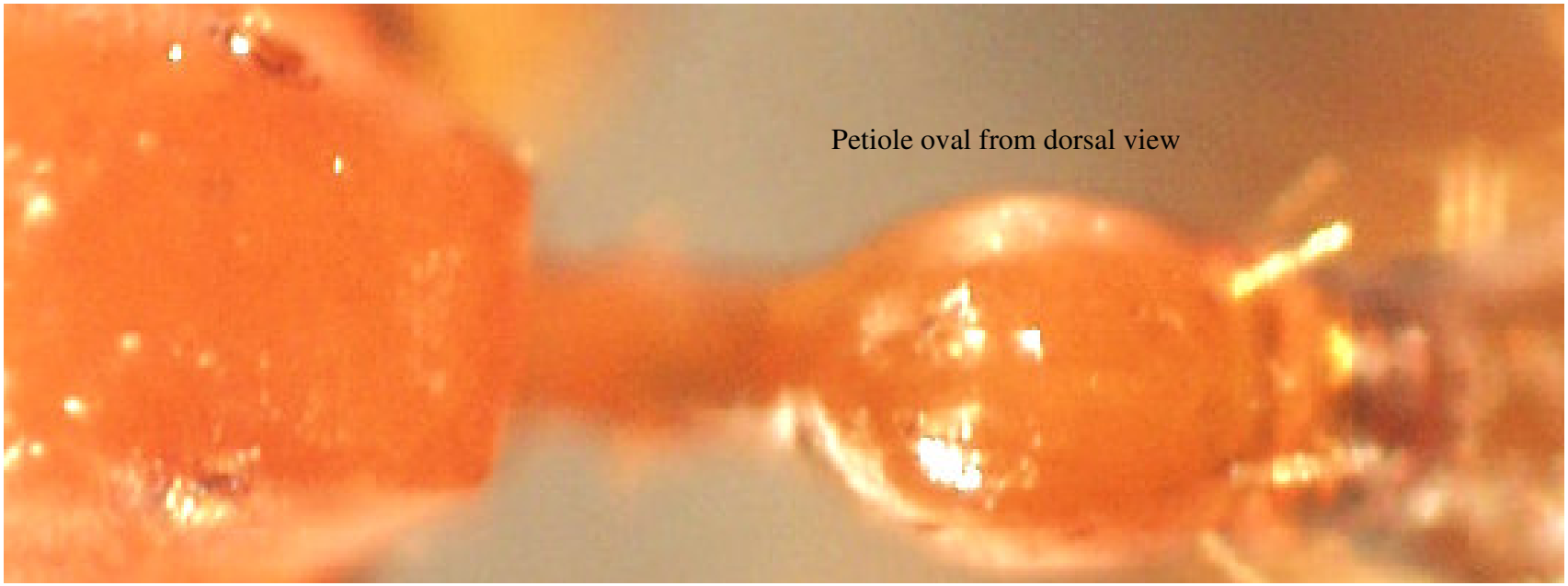
Description: Lacks distinct epinotal spines. Small node at the base of the antennal scape projects anteriorly. Node of the petiole longitudinally oval when seen from above and scarcely wider than its posterior peduncle. Brownish-yellow coloration 4.5-5.0 mm in length. Most individuals are lighter than the specimen in these photos. **References:** Creighton (1950)

Aphaenogaster floridana (Continued)



Aphaenogaster floridana (Continued)





Aphaenogaster rudis complex

Description: No lobe or node on scape. Epinotal spines present. Pronotum heavily shagreened, its surface opaque or subopaque. Narrow and elongated head; about 1/3 longer than broad. Yellowish-brown coloration. Keys to *A. texana carolinensis* in Mackay's key, but Stefan Cover suggests that there is "no good way to tell these rudis group species apart."

References: Creighton (1950), Crozier (1977)

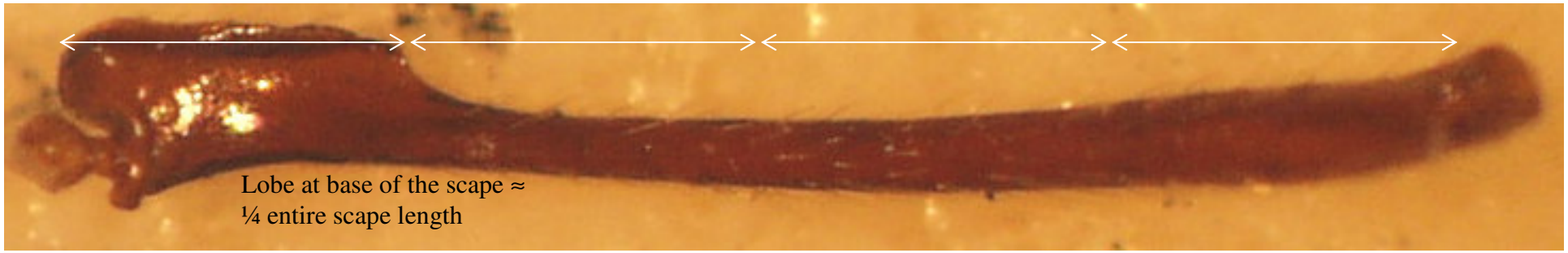
Aphaenogaster rudis (Continued)

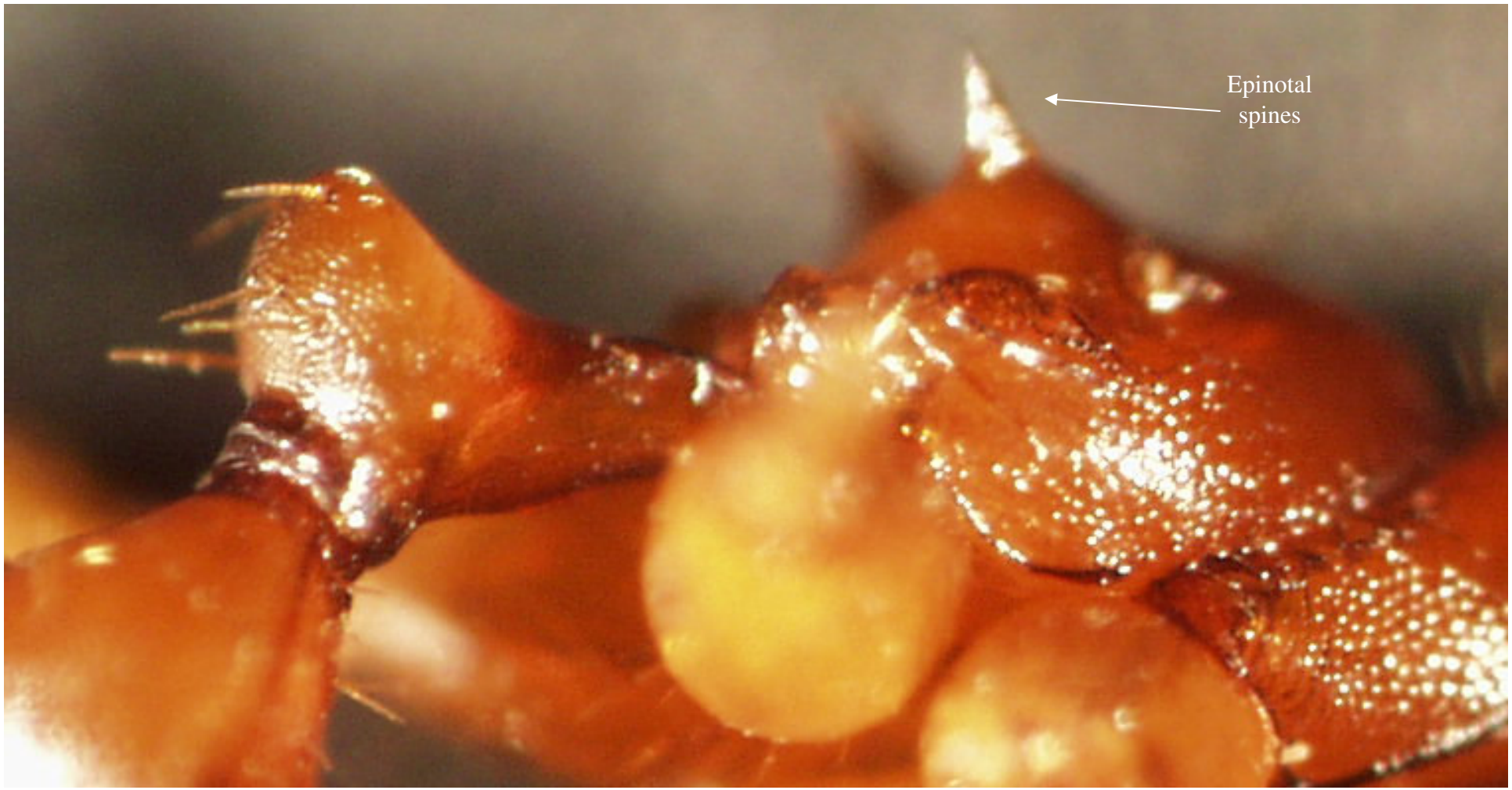
Aphaenogaster treatae Forel

Description: Obvious lobe at the base of the scape, extending rearward; the lobe is thick and at least ¼ the length of the scape. *Aphaenogaster ashmeadi*, a similar species, has a thin lobe that is about 1/5 the length of the scape. Epinotal spines present. (Previously misidentified as *A. ashmeadi*, which has a shorter, thinner flange. *A. ashmeadi* is very dark.) **References:** Creighton (1950)

Aphaenogaster treatae (Continued)

Aphaenogaster treatae (Continued)





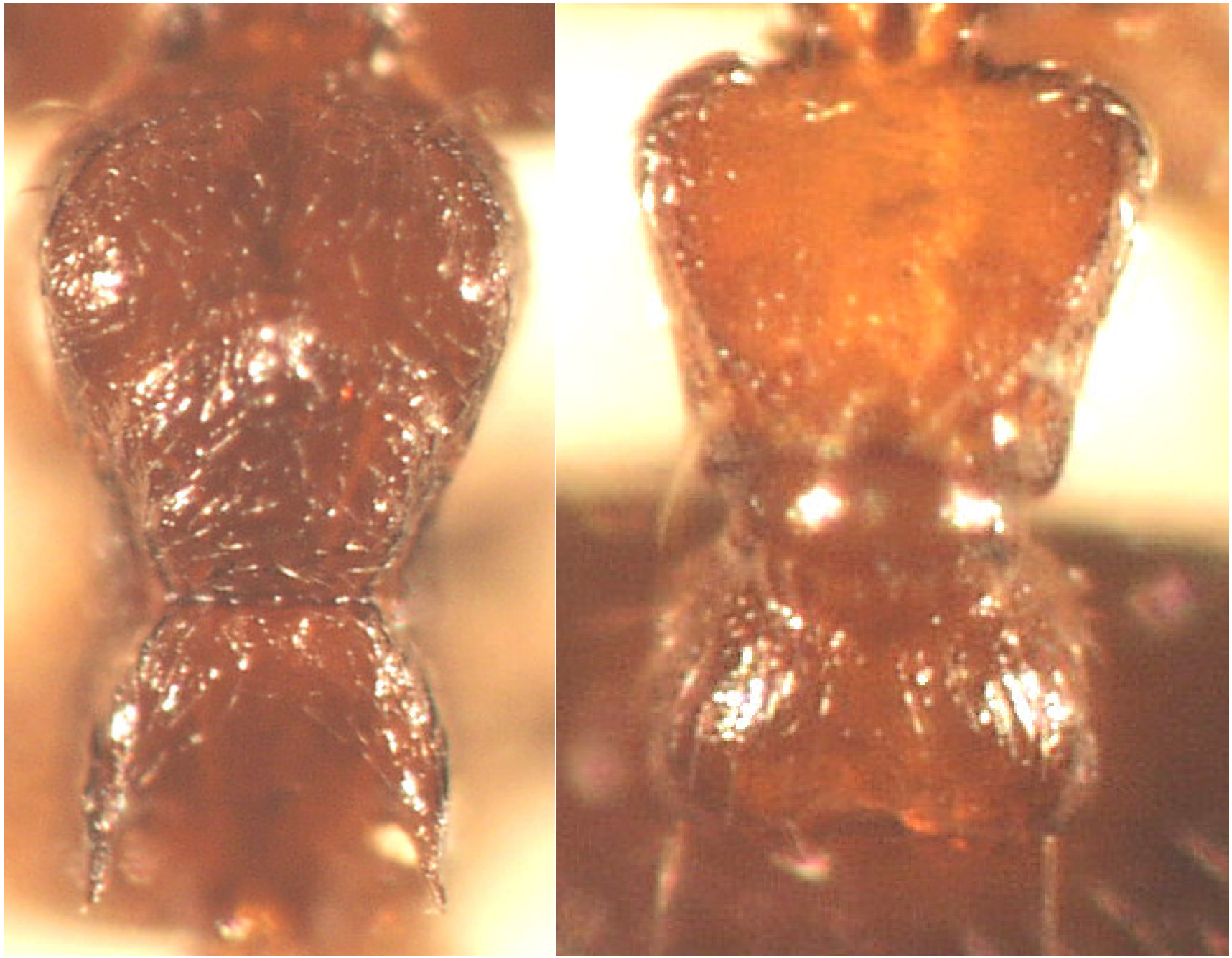
Crematogaster ashmeadi Mayr

Description: Post-petiole attaches to gaster posteriorly. Gaster is shaped like a heart when viewed dorsally. Postpetiole with a median sulcus (groove). Thoracic dorsum with less than 8 erect hairs. Scape does not surpass the occipital border. Epinotal spines very short and curve distinctly inward; spines do not diverge and have a thicker base than *C. atkinsoni.* Yellow to brown color (yellow live in pines, brown oaks).

References: Creighton (1950), Johnson (1988)

Crematogaster ashmeadi (Continued)

Crematogaster ashmeadi (Continued)



Crematogaster atkinsoni

Description: Post-petiole attaches to gaster posteriorly. Gaster is shaped like a heart when viewed dorsally. Postpetiole with a median sulcus (groove). Thoracic dorsum with less than 8 erect hairs. Scape does not surpass the occipital border. Epinotal spines long and divergent. Lack a band of erect hairs on the pronotum . *C. lineolata* was previously identified as *C. atkinsoni.* We still need to check all ants from 2000-2002.

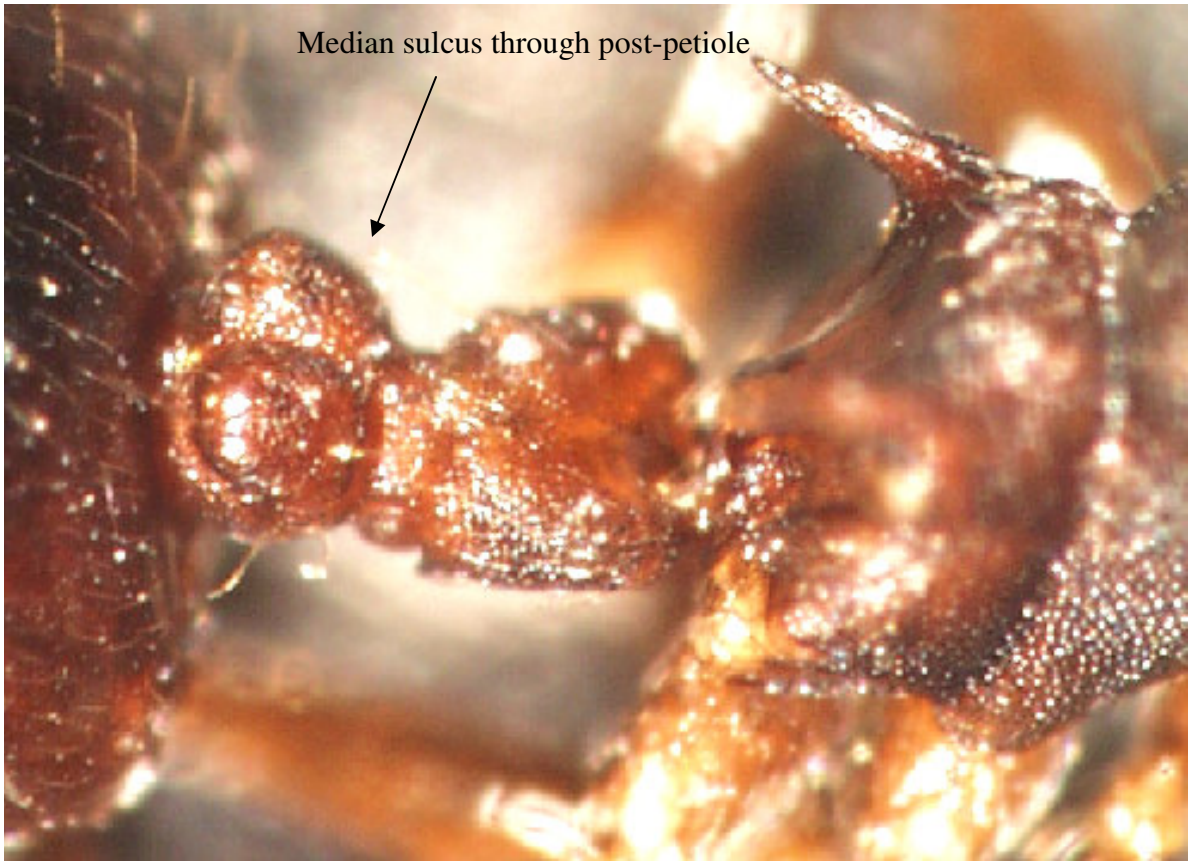
References: Creighton (1950), Johnson (1988)

No specimens identified yet

Crematogaster lineolata (Say)

Description: Post-petiole attaches to gaster posteriorly. Gaster is shaped like a heart when viewed dorsally. Postpetiole with a median sulcus (groove). Dorsal surface of pronotum sculpted, giving it a roughened, opaque surface. Thoracic dorsum with at least 15 erect hairs. A band of erect hairs occurs transversely across the pronotum. Resembles *ashmeadi*, but larger and with long, narrow diverging epinotal spines. Dark brown color. Most of these were formerly misidentified as *C. atkinsoni*, which has a smooth pronotum and erect hairs only on the humeral shoulders. **References:** Creighton (1950), Johnson (1988)

Crematogaster lineolata (Continued)

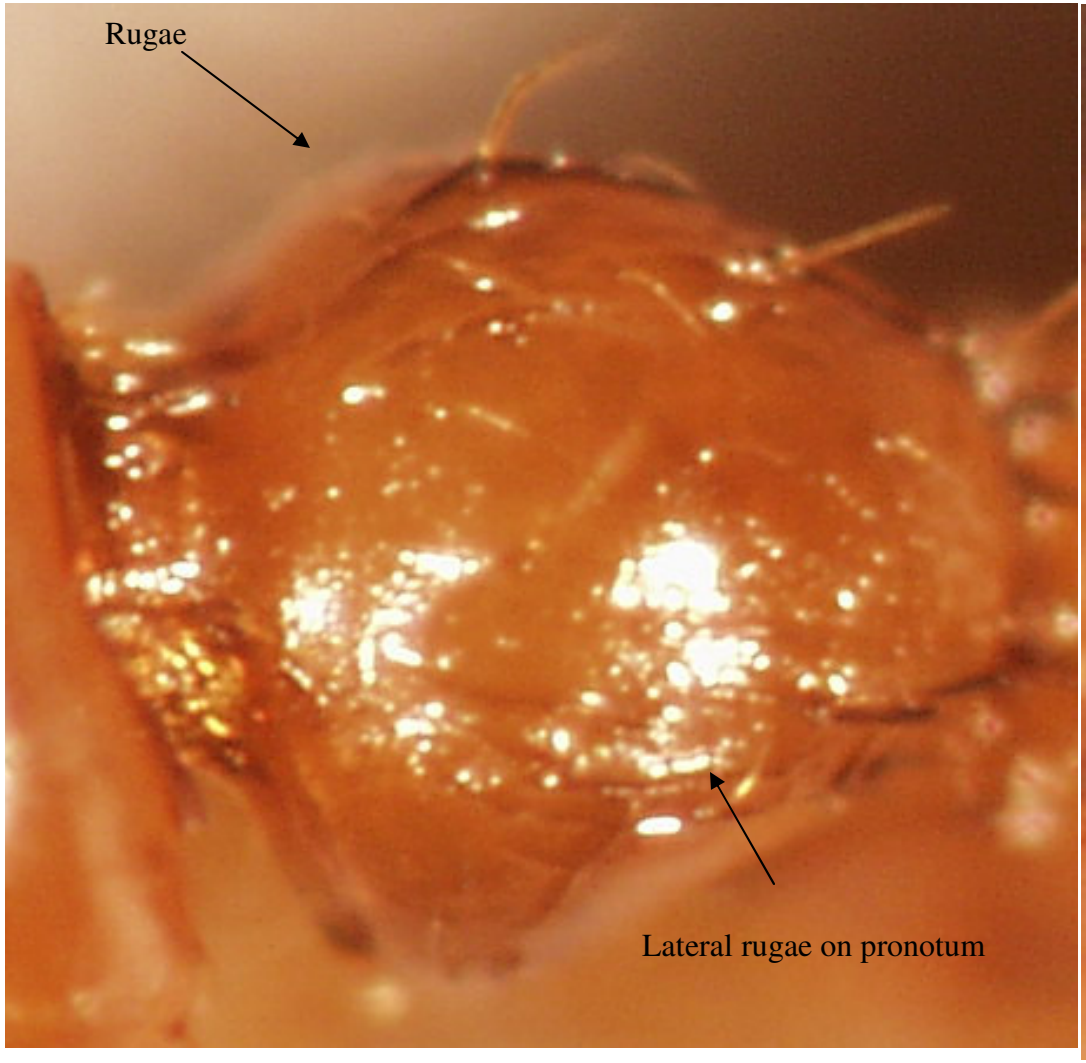


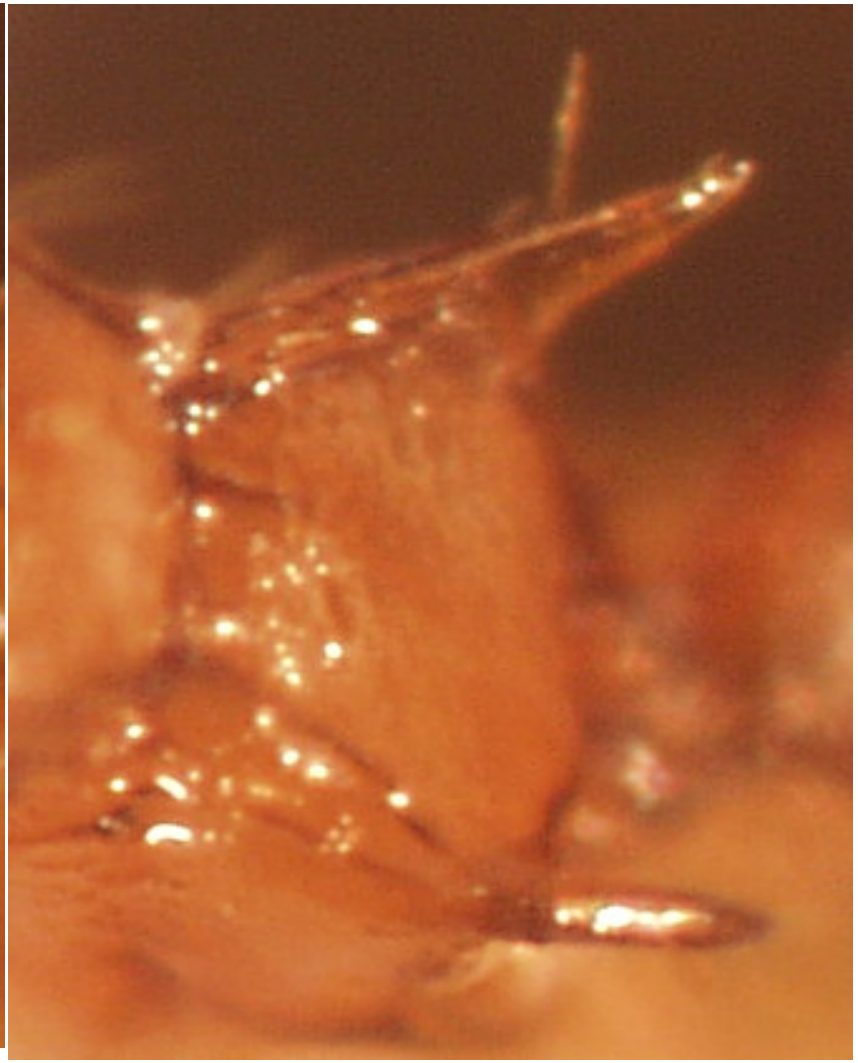
Crematogaster missuriensis (Emery)

Description: Post-petiole attaches to gaster posteriorly. Gaster is shaped like a heart when viewed dorsally. Postpetiole suboval and entire, without a median sulcus (distinguishing it from *ashmeadi* and *lineolata*). Very small size. Yellow color. *Crematogaster minutissima* is a related species that be distinguished from *missuriensis* by the location of pronotal rugae and the length of the epinotal spines. **References:** Creighton (1950), Johnson (1988)

Crematogaster missuriensis (Continued)

Crematogaster missuriensis (Continued)

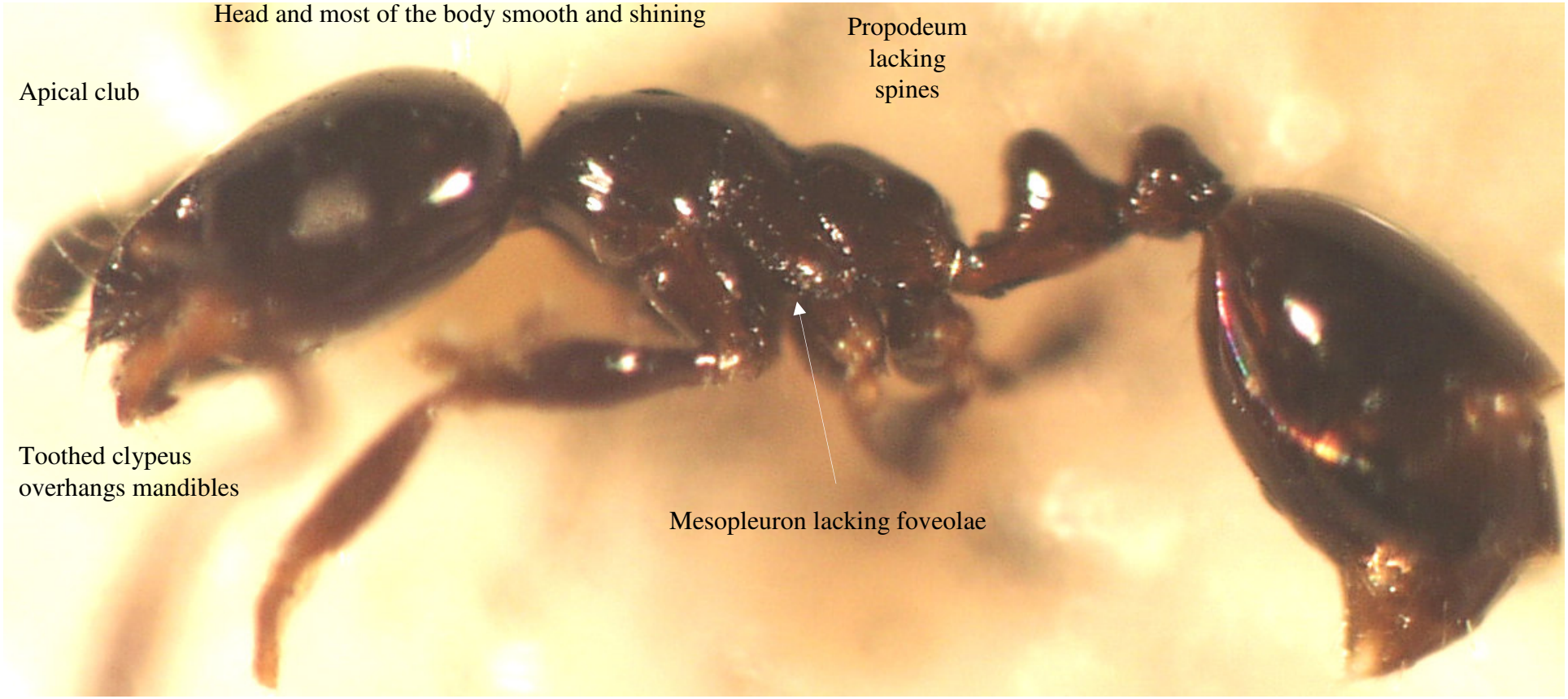




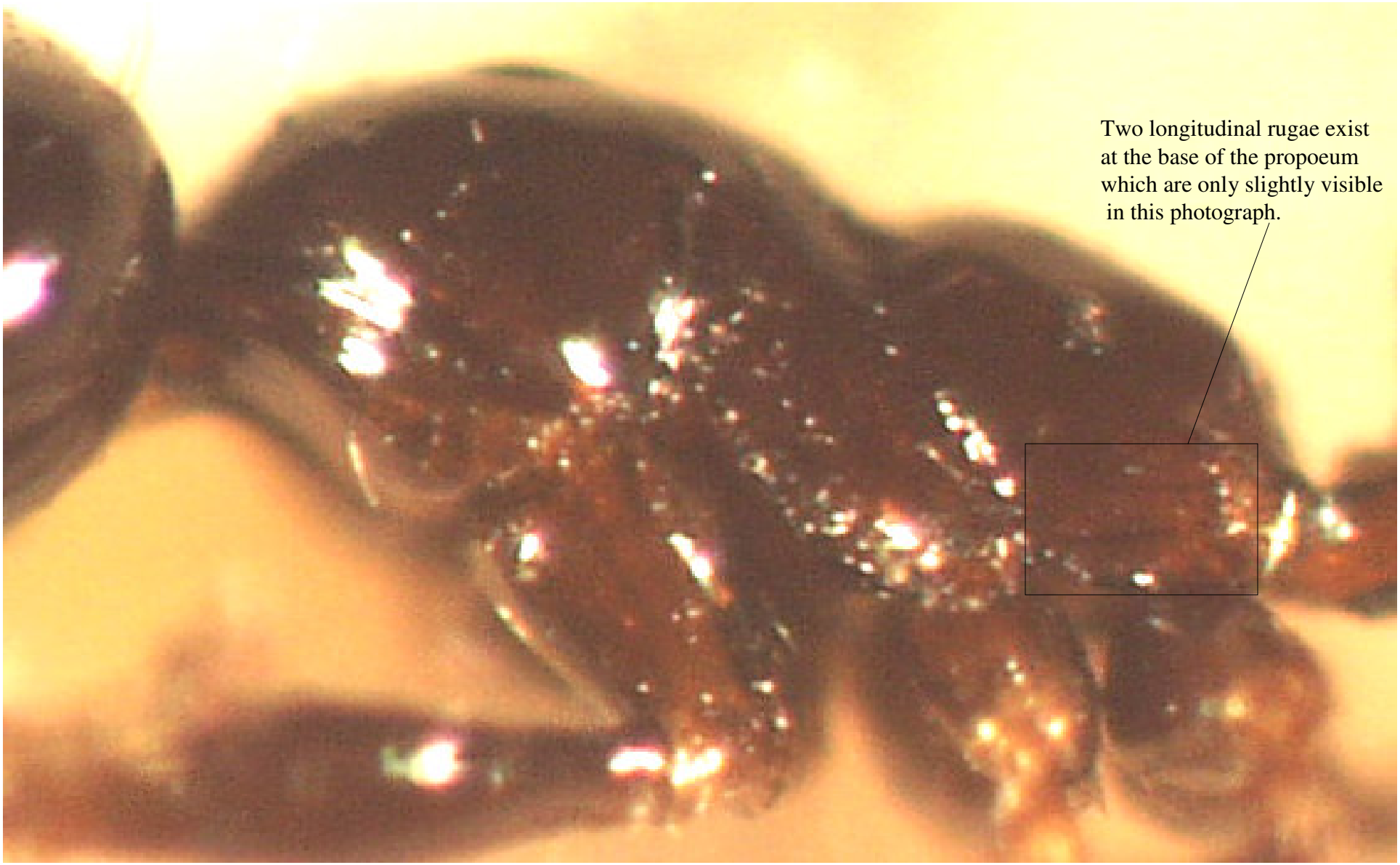
Prododeal spines directed upward, and about ½ as long as the distance between their bases

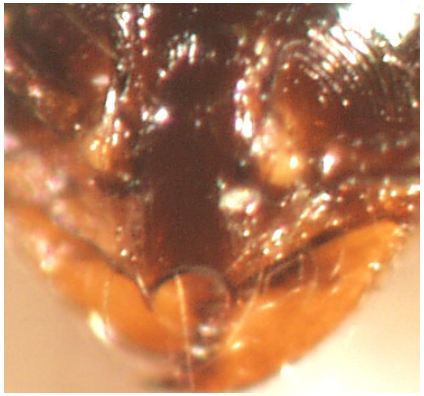
Monomorium nr. *minimum* (Buckley)

Description: Antennae with 12 segments; apical club of 3 segments. Propodeum angular and lacking spines. Mesopleuron not punctate. All surfaces smooth and shining. Dark brown color. (Previously misidentified as *Cardiocondyla venustula*.) This species could also be *trageri*.
References: Creighton (1950), DuBois (1986)



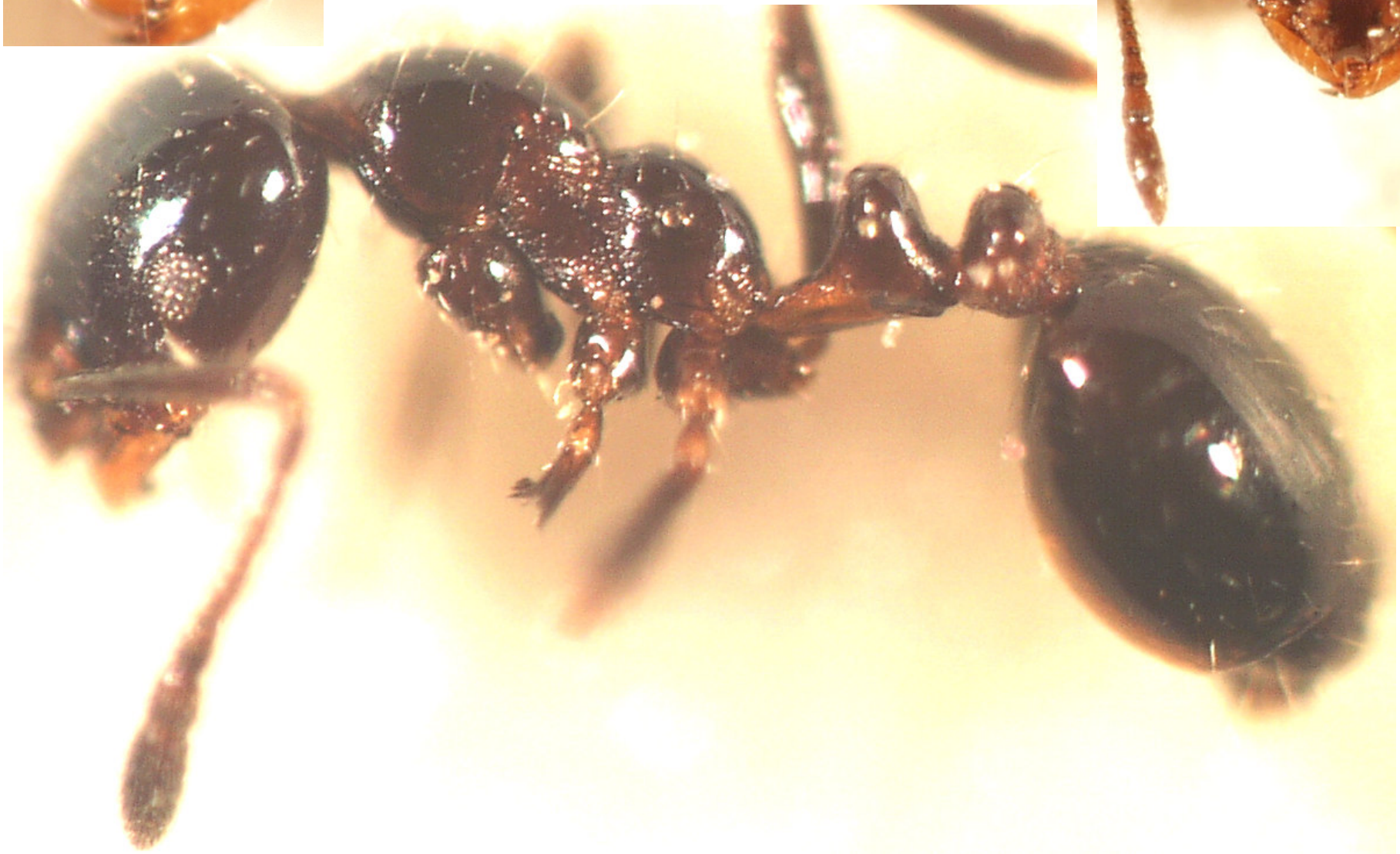
Monomorium nr. *Minimum* (Continued)





NR: *Monomorium trageri*

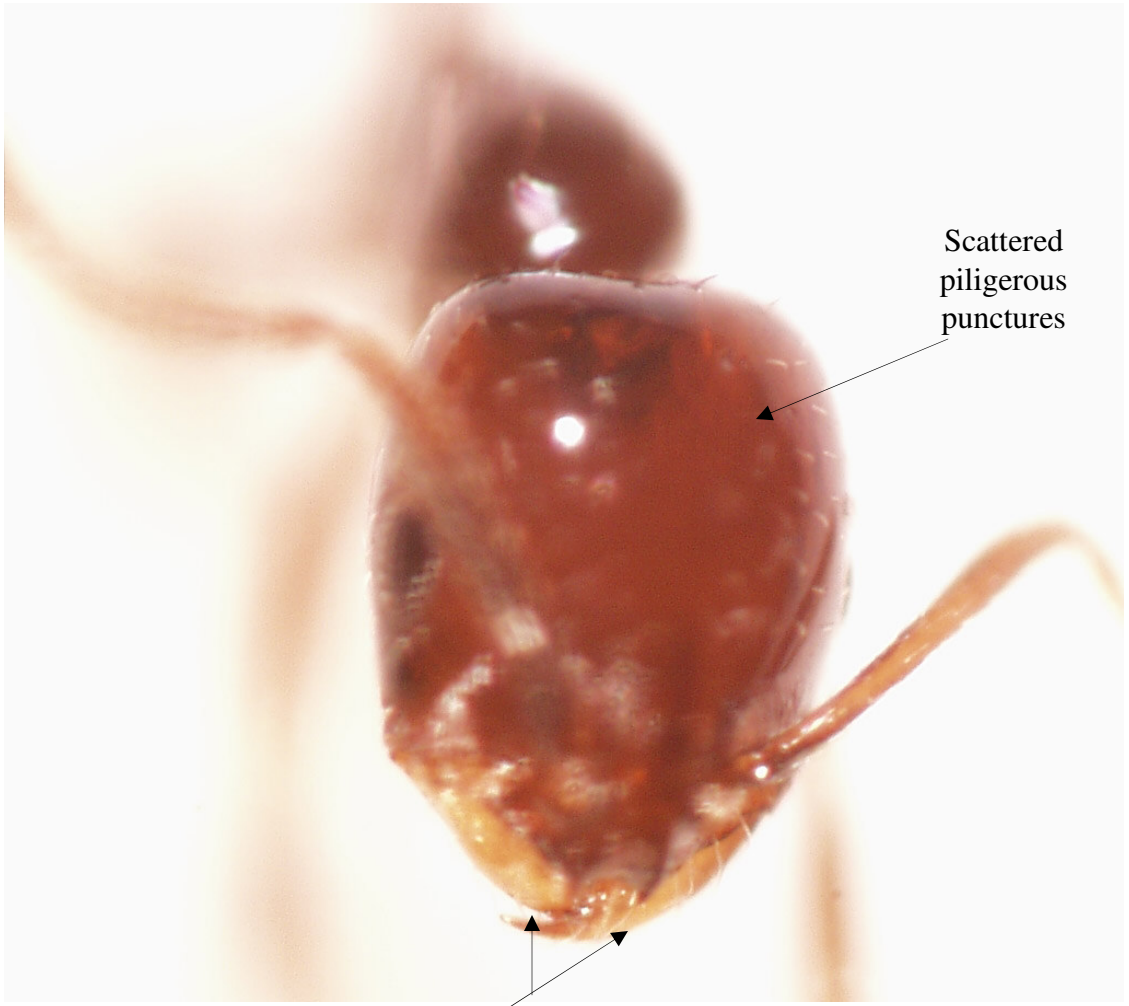
8-12 erect setae on dorsum of alitrunk
Propodeum angular havin distinct rugae along the basal face.
Mesopleuron punctate and mesonotal suture having distinct parallel rugae.



Monomorium viride Brown

Description: Propodium unarmed. Head with scattered piligerous punctures. Distinct teeth at ends of clypeal carinae. Node of petiole higher than base is long. Clypeal teeth straight. **References:** Creighton (1950)

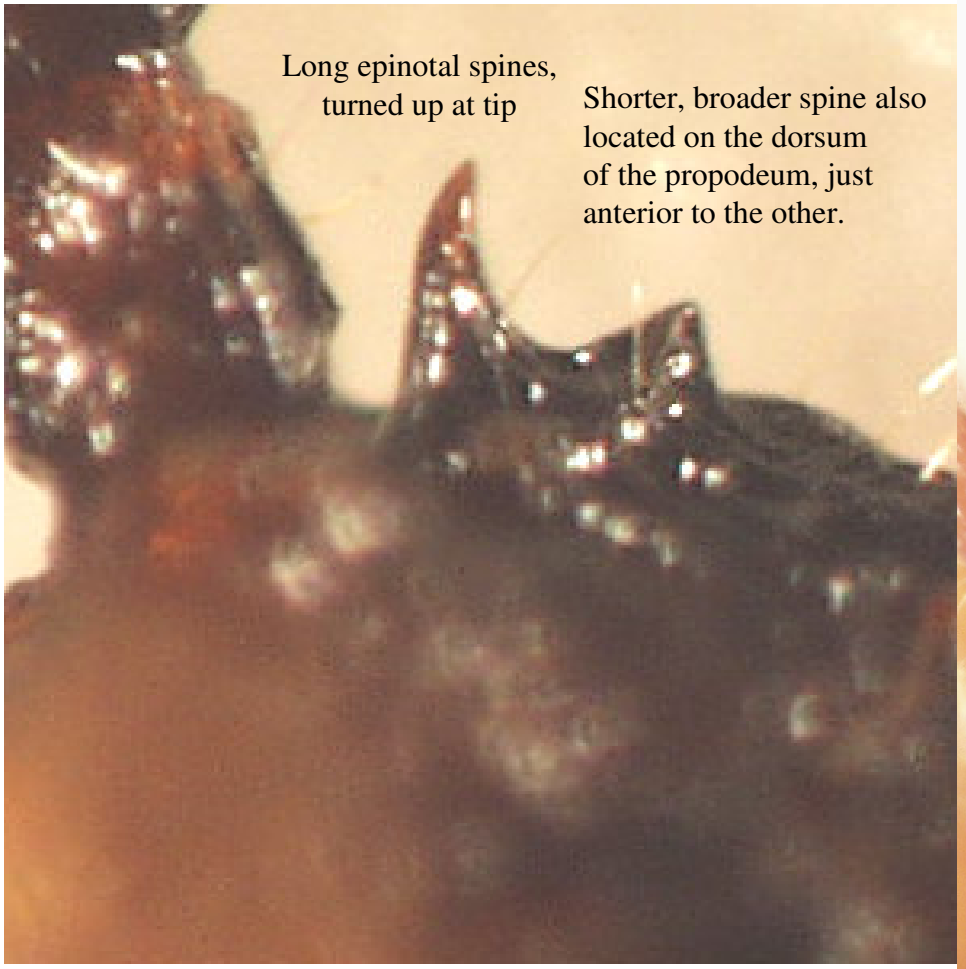
Monomorium viride (Cont'd)

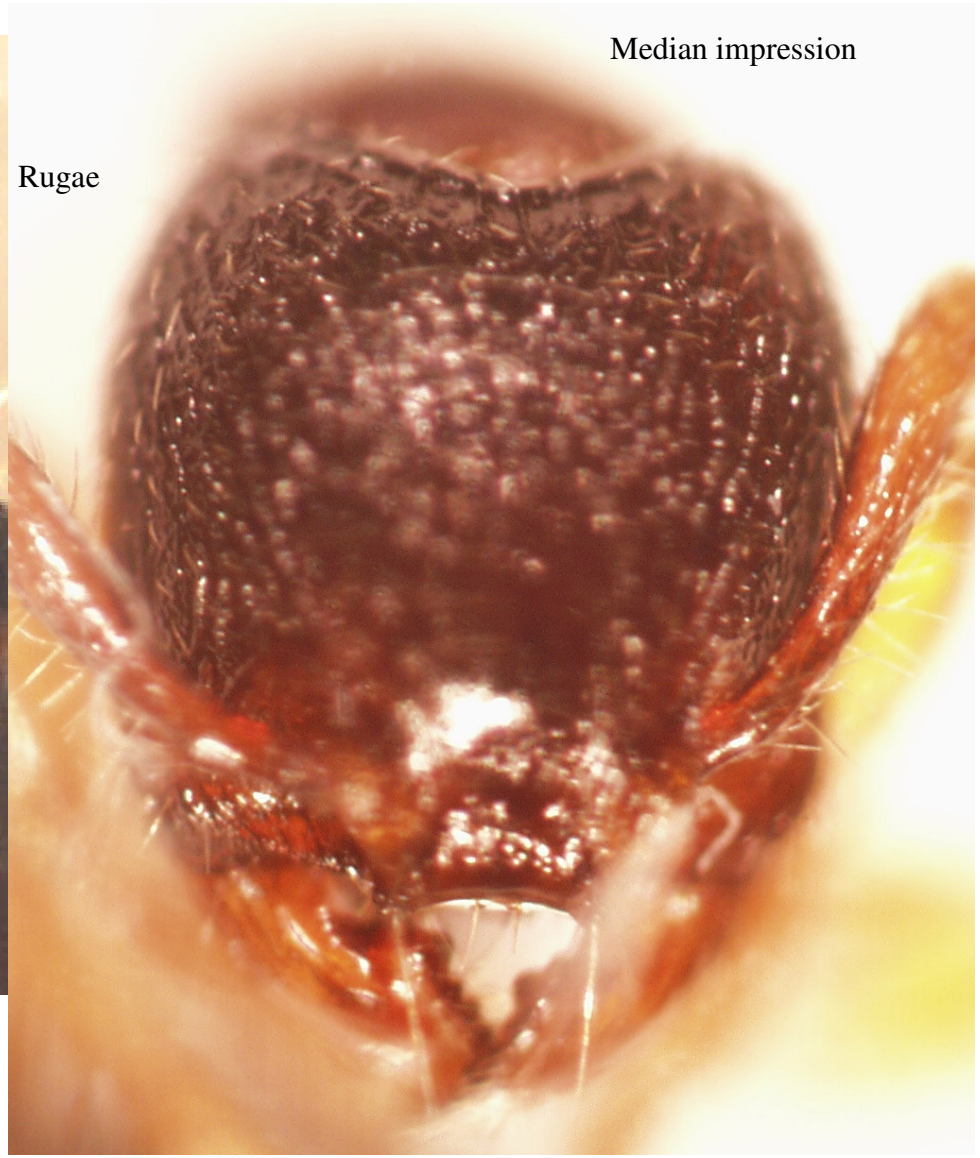


Myrmecina americana Emery

Description: Antennae with 12 segments. Palp formula less than 6,4. Epinotal spines long and turned upward at their tips. Short spine just anterior to the long one on each side. Cephalic rugae heavy. Occipital border with a pronounced median impression. 3.5 mm **References:** Creighton (1950)

Myrmica americana cont'd

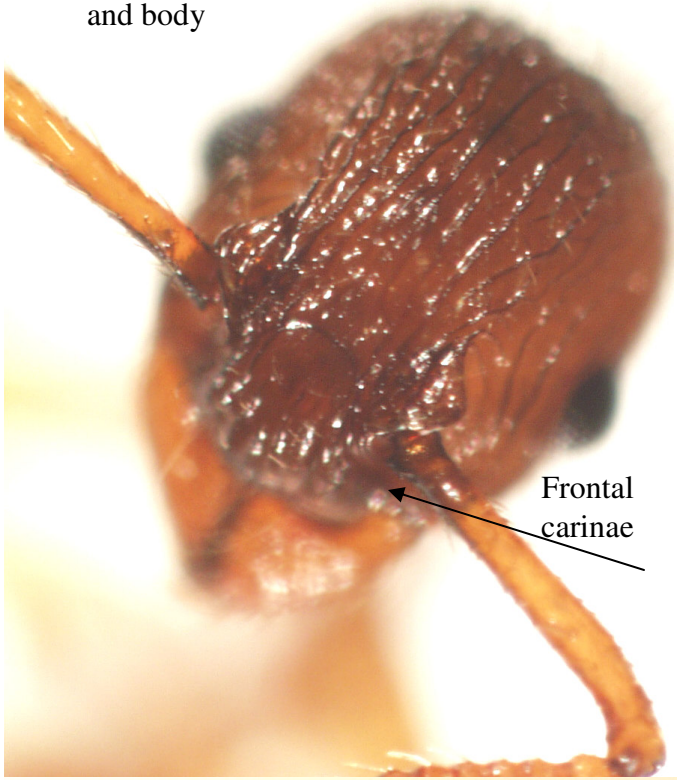




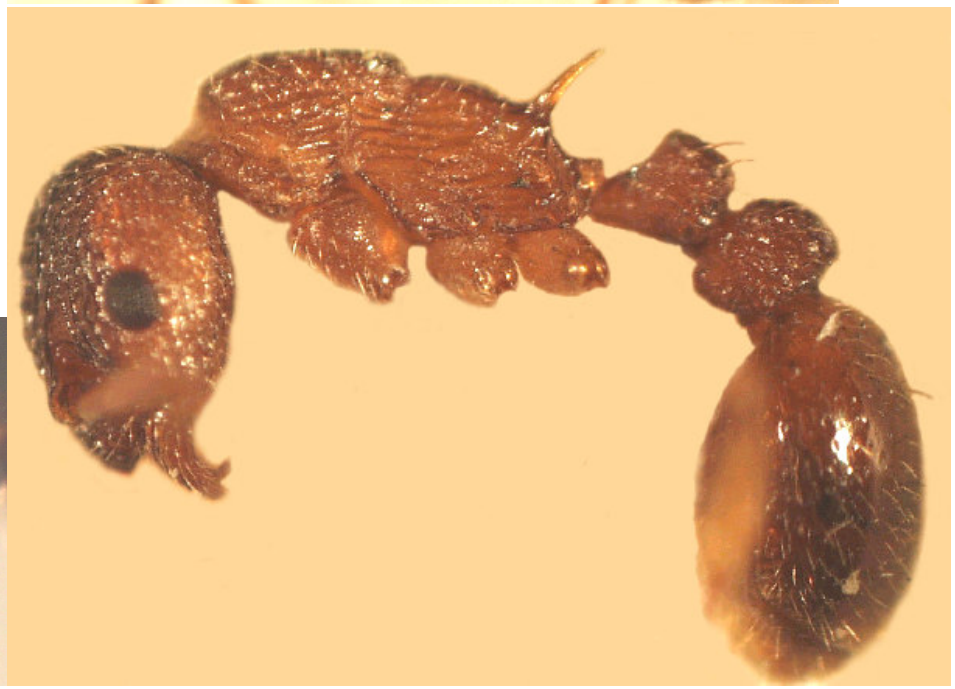
Myrmica latifrons Starcke

Description: Antennae with 12 segments. Palp formula 6,4. Frontal area obscured by rugae. Frontal lobes projecting over the antennal fossae. Antennal scape suddenly bent. [Sally Branch Low] **References:** Creighton (1950)

Rugae on head
and body



Frontal
carinae



Sudden bend in scape

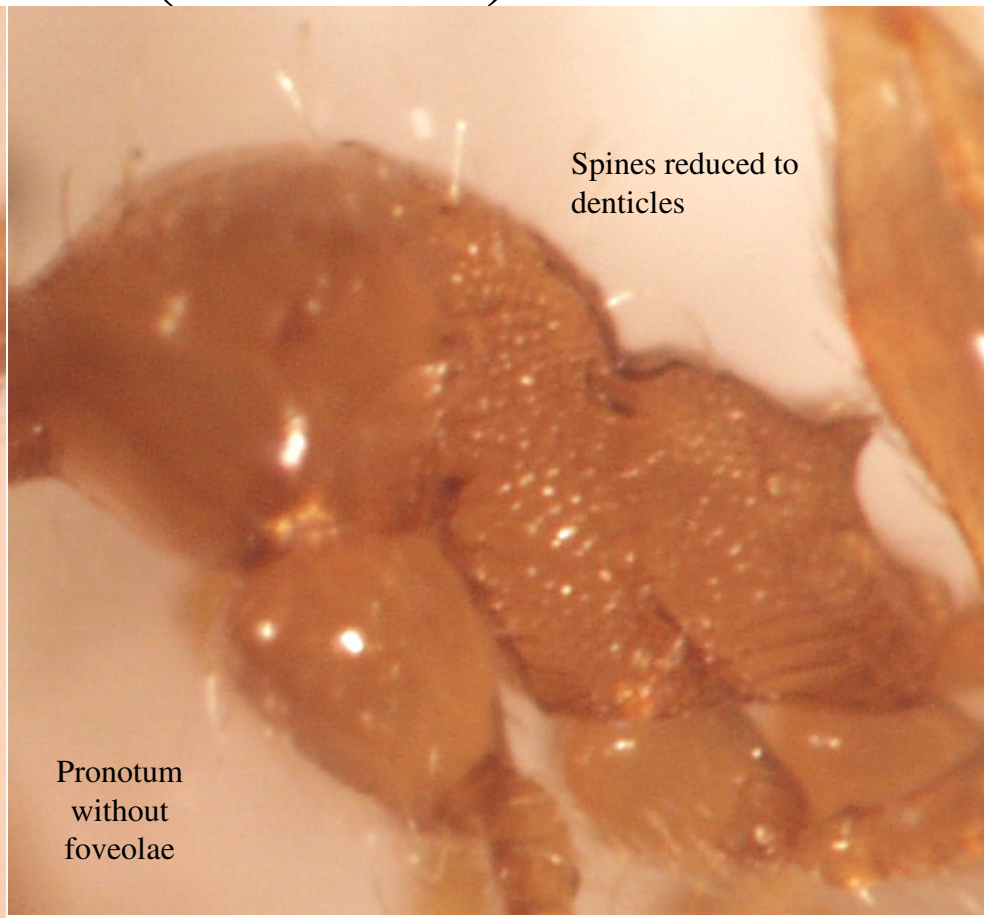
Pheidole

Description: 12 segments per antennae. Mesonotal suture present. Propodeum distinctly lower than Pronotum. Mandible massive; 6 or more teeth. Third tooth smaller than the fourth tooth. Eyes in front of the midlength of the sides. Palp formula 2,2 or 3,2. At least 10 species in the southeast.

Pheidole bicarinata Mayr

Description: Pilifera group. Quadrate head. Antennal club 3 segments. Mesonotal convexity absent. Head quadrate; lateral margins straight to weakly curved; head capsule almost as wide as it is long. Eyes relatively large. Scapes not surpassing posterior margin of head by more than the 1st funicular joint. Propodeal spines reduced to denticles. Pronotum without foveolae. Head with foveolae and rugulae only in the gena. Yellowish brown to dark brown. [*P. pilifera* is darker and has foveolae on the entire head.] **References:** Wilson (2003)

Pheidole bicarinata (Continued)



Pheidole bicarinata (Continued)

Major

Pheidole crassicornis Emery

Description: Crassicornis group. Flattened basal portion of scape. Scape strongly bent at the base (majors), and relatively long (minors). Mesonotal convexity present. Foveolae cover most of the head. Yellowish-brown color. Most common species of *Pheidole* at Fort Benning. **References:**Wilson (2003)

Pheidole crassicornis cont'd

Pheidole crassicornis (Continued)

Major

Pheidole davisi Wheeler

Description: Pilifera group. Quadrate head. Antennal club 3 segments. Scapes not surpassing posterior margin of head by more than the 1st funicular joint. This species resembles *P. davisi*, which is only reported from Florida. Very small size (1.7 mm). Foveolae on mesosoma, but not on head. Numerous erect hairs on dorsum of mesonotum. Carinae possible on mesosoma and propodeum, but not strong (not easily visible in photos). Minor is dark reddish brown (more brown than the photos suggest). Rare. Two specimens from Wildlife Plot (L1) 2002, one sp. From F1-1 2003. Similar to metallescens, but not bluish-black, and head is quadrate, not elongate. **References:** Wilson (2003)

Alitrunk completely foveolate
Head smooth and shining.
Very small.

Pheidole dentata Mayr

Description: Fallax group. Scape not strongly bent at the base (majors), and relatively long (minors). Mesonotal convexity present. Most of the head and pronotum free of foveolae. Second most common species of *Pheidole* at Fort Benning, often in the same samples as *P. crassicornis*.

References: Wilson (2003)

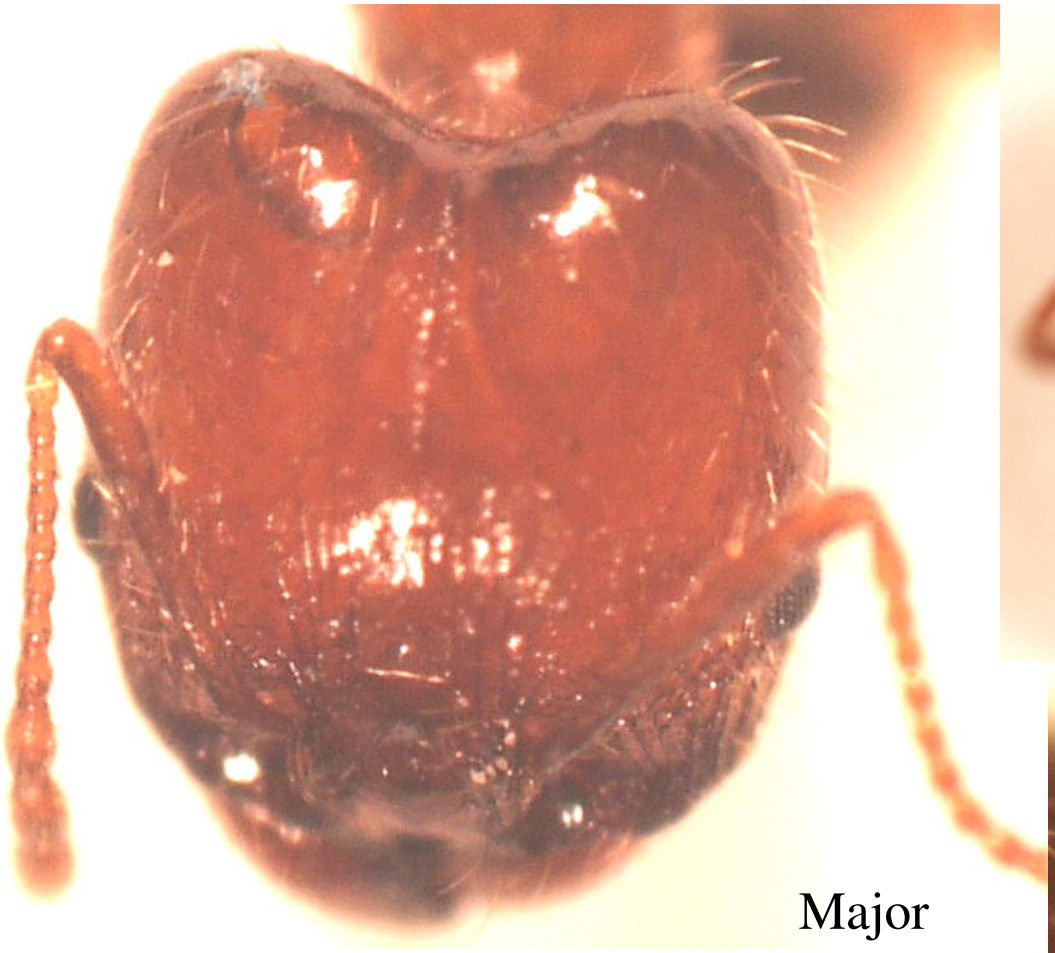
Head and pronotum smooth and shining, not foveolate.

Mesonotal convexity

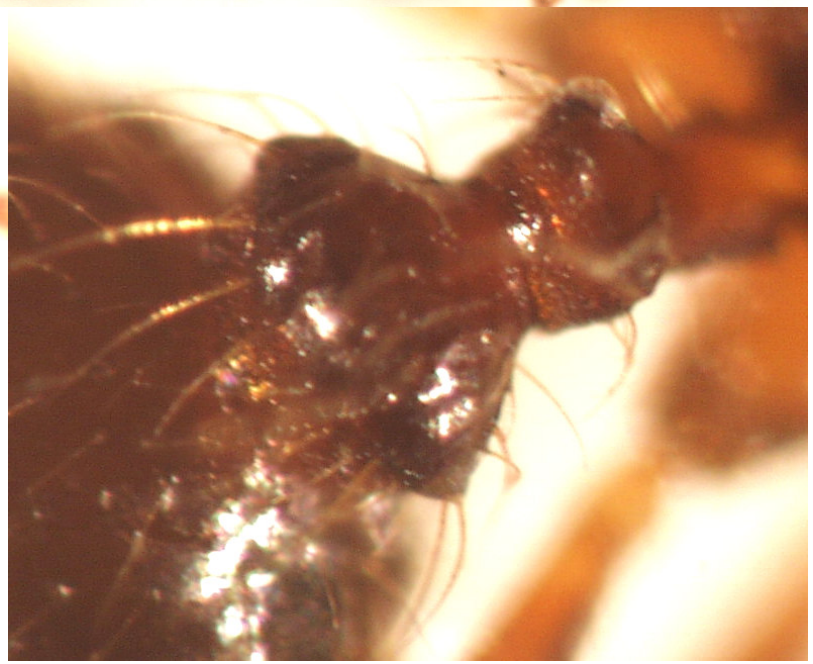
Epinotal spines

Pheidole dentata cont'd

Pheidole dentata (Continued)



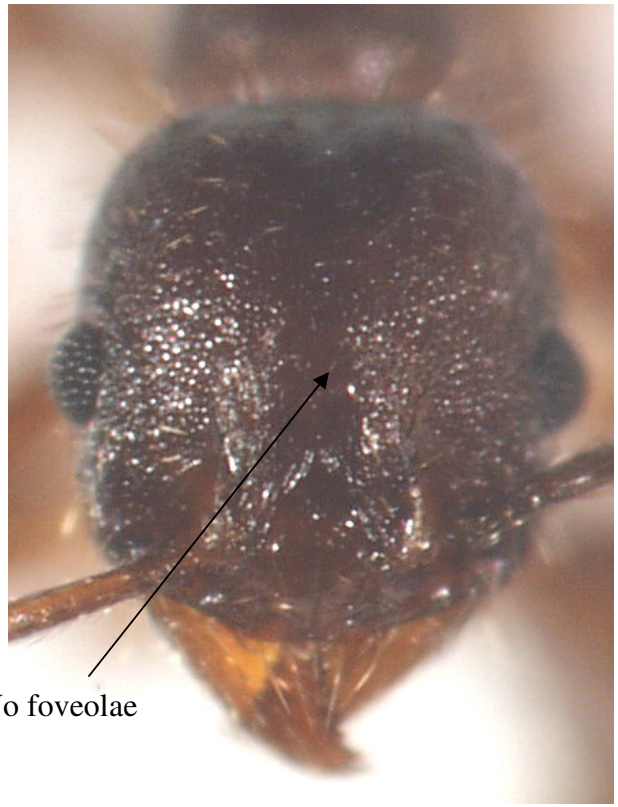
Major

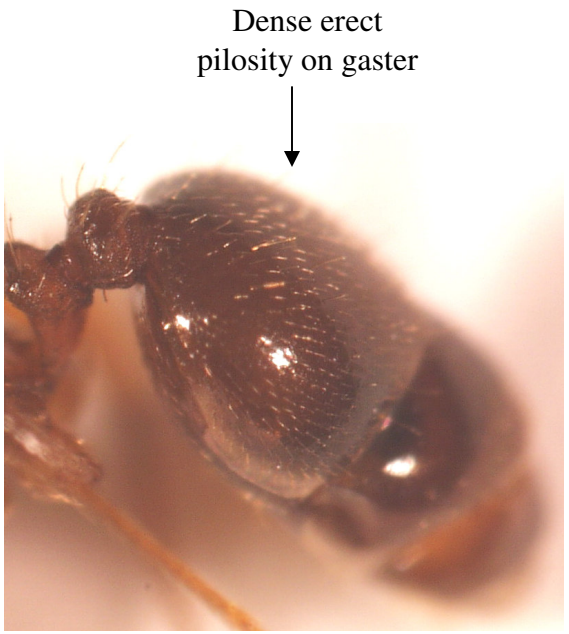


Pheidole diversipilosa Wheeler

Description: Crassicornis group. Flattened basal portion of scape. Scape strongly bent at the base (majors), and relatively long (minors). Mesonotal convexity present. Foveolae cover most of the head. Yellowish-brown color. Very similar to the more abundant P. crassicornis. Major differs from crassicornis in the shape of the head lobes and by having more hairs on the gaster. The minor has a bald (no foveolae) on the dorsum of the pronotum. Some of the majors key to *diversipilosa*. Nevertheless, it has been impossible to distinguish the minors from those of *crassicornis*. Stefan Cover is not convinced that the two are distinct species in the southeast. Wilson is ambiguous on the range (Florida to Arizona at the top of the page, but Texas to Arizona in the text). For now, these should be considered as a variant of *P. crassicornis*.

References: Wilson (2003)





Pheidole diversipilosa (Continued)

Heart-shaped head

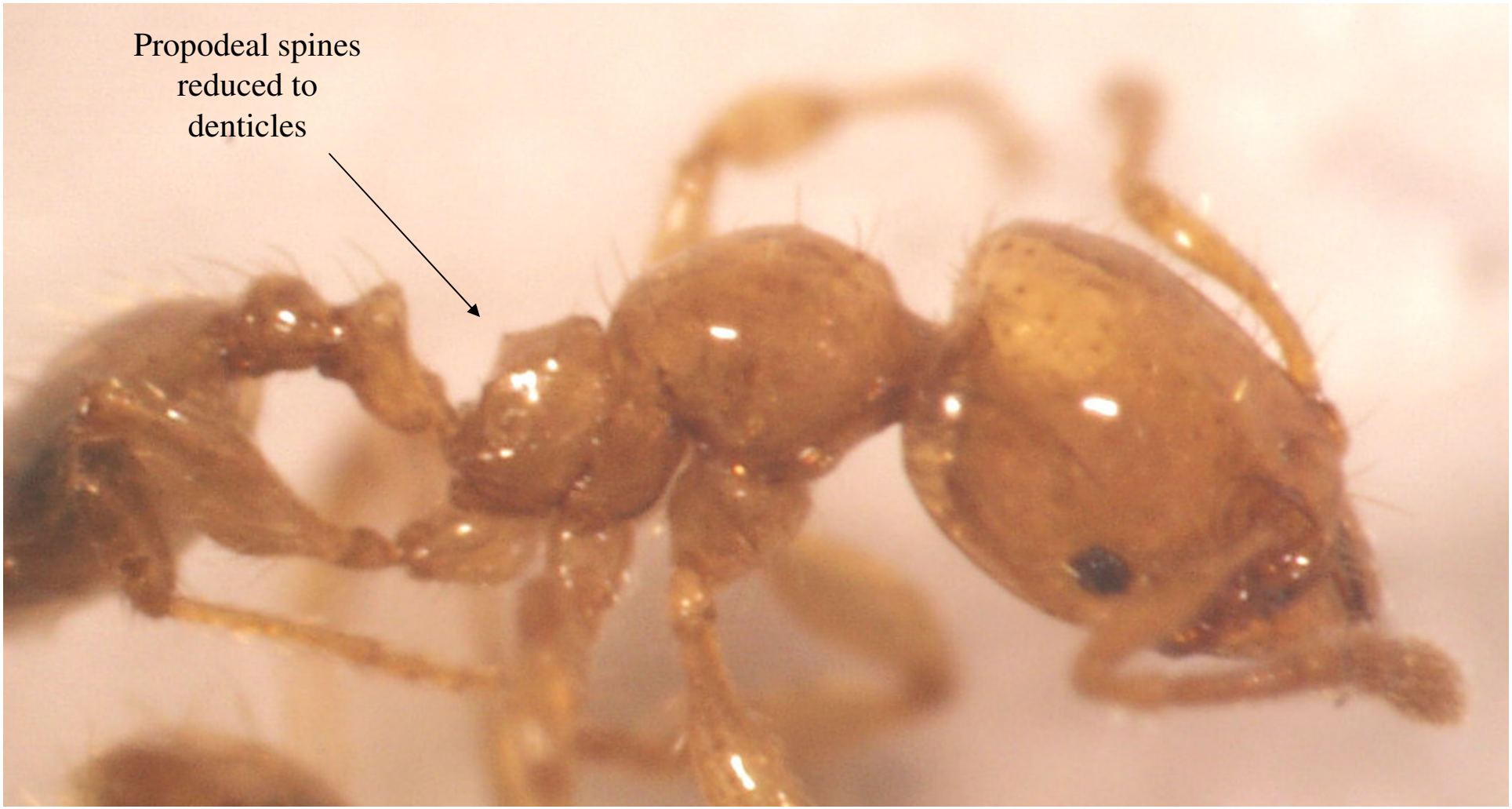
Bare spot

Major

Pheidole lamia Wheeler

Description: Lamia group. Small size and phragmotic heads in the majors. No folveolae on any part of the body or head. Propodeal spines reduced to denticles. Obvious declivatous face of mesonotum. A small yellow *Pheidole*, first seen in D16-4. Major has a bizarre, enlarged head. Rare. *Pheidole morrisi*, which is the other yellow *Pheidole*, has foveolae on mesonotum and propodium. **References:**Wilson (2003)

Pheidole lamia (cont'd)

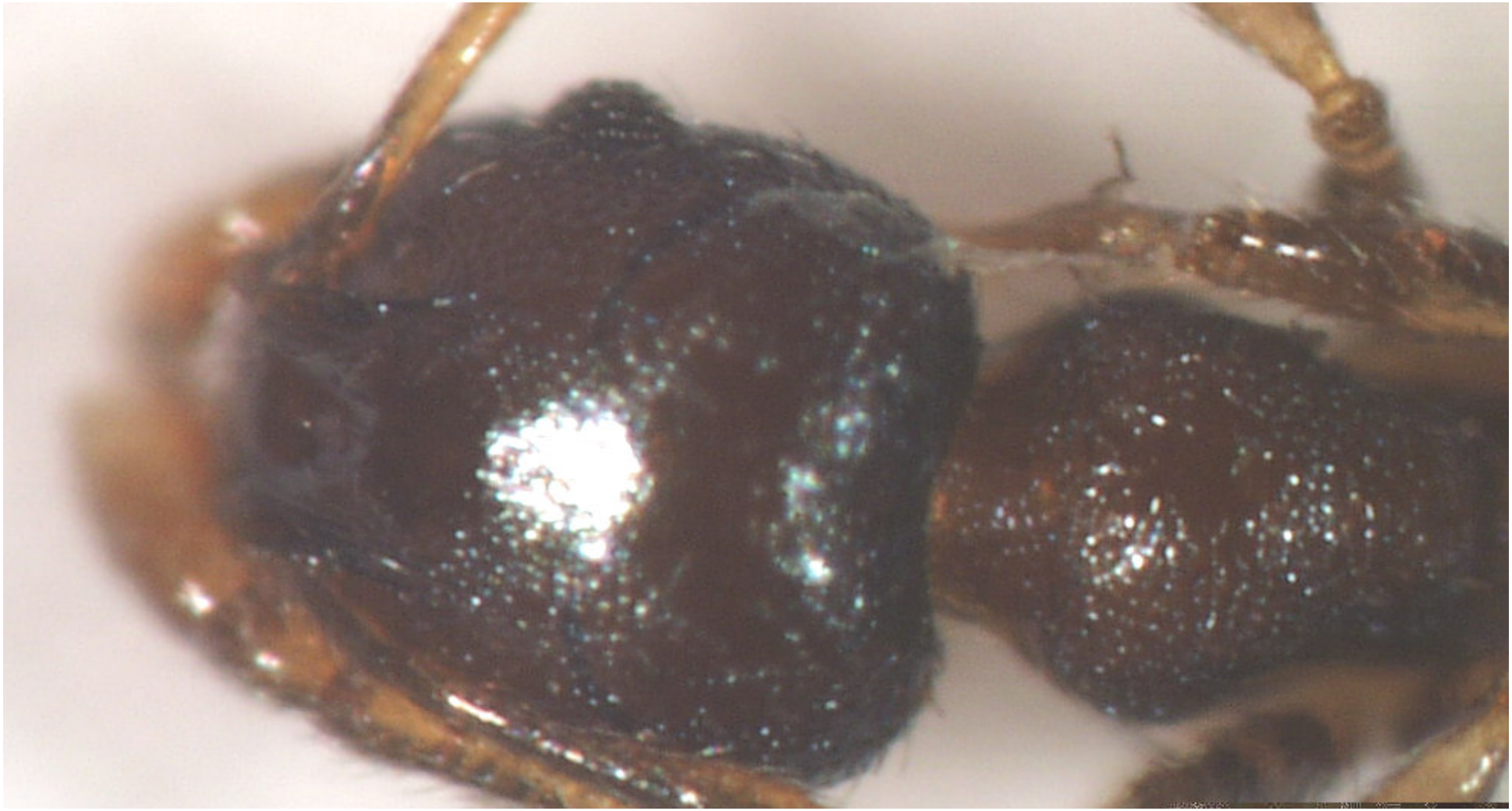


Pheidole metallescens

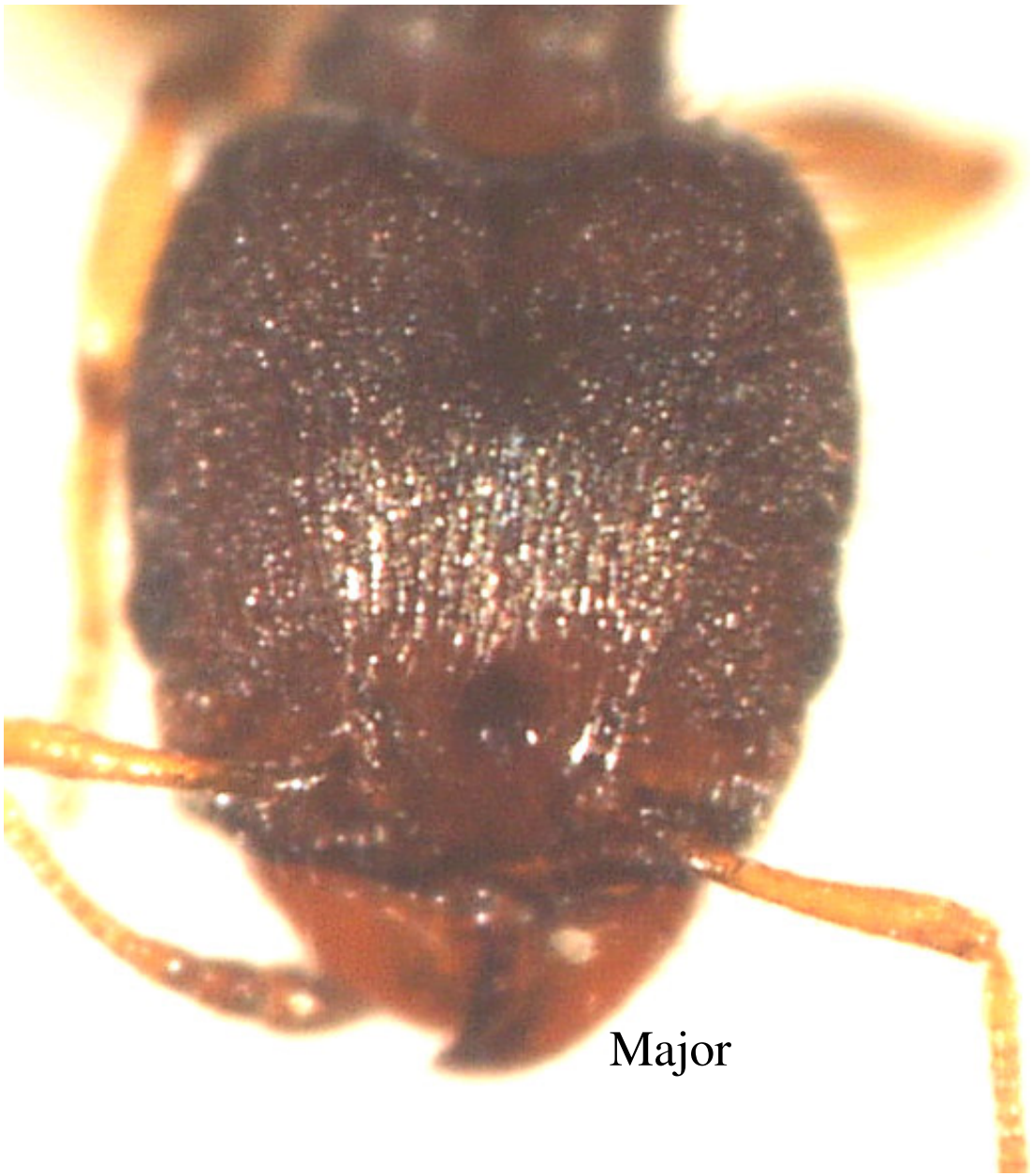
Description: Flavens group. Small size. Mesonotal convexity vestigial. Body blackish, with bluish reflections. Some minors have entirely foveate heads.

References: Wilson (2003)

Pheidole metallescens (Continued)



Pheidole metallescens (Continued)



Major

Pheidole morrisii Forel

Description: Fallax group. Scape not strongly bent at the base (majors), and relatively long (minors). Mesonotal convexity present. Most of the head and pronotum free of foveolae. Narrow head. Propodeal spines reduced to angles. Yellow. **Major:** propodeal spines reduced to denticles. Rugoreticulum lacking on the head. Pilosity dense and very long. Postpetiole elliptical when viewed from above. Foveolate alitrunk closely resembling the pattern on the minor. **References:** Wilson (2003)

Minor

Pheidole morrisii (Continued)

Major

Pheidole morrisii (Continued)

Minor

Major

Pheidole pilifera (Roger)

Description: Pilifera group. Quadrate head. Antennal club 3 segments. Head reticulo-punctate. Scapes not surpassing posterior margin of head by more than the 1st funicular joint. Head completely punctate. Most of mesosoma foveolate and opaque. Usually light reddish brown. First seen at Underwood Road Site (cluster 2, 2000).

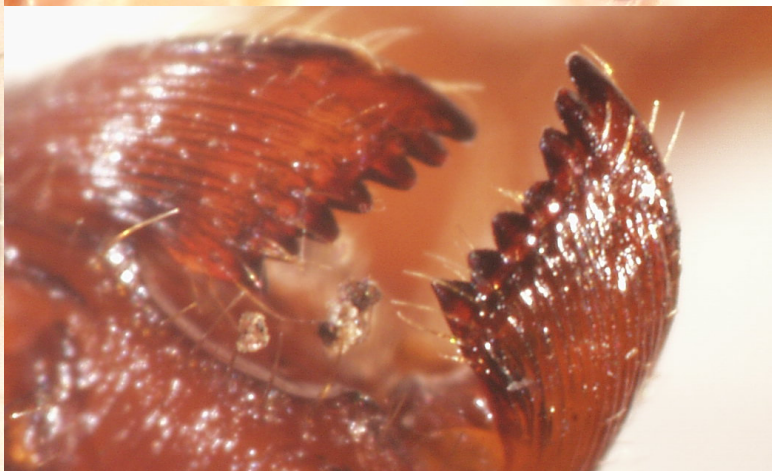
References: Wilson (2003)

Pheidole pilifera (Continued)

Pogonomyrmex badius Latreille

Description: 12 antennal segments. Petiolar node set off sharply from the long, distinctive anterior peduncle. Psammophore well developed. Lower surface of head with a row of long, coarse hairs on either side. Major worker with a disproportionately large head. Nest is a flattened crater with an irregular central entrance. Painful sting. **References:** Creighton (1950)

Pogonomyrmex badius (Continued)

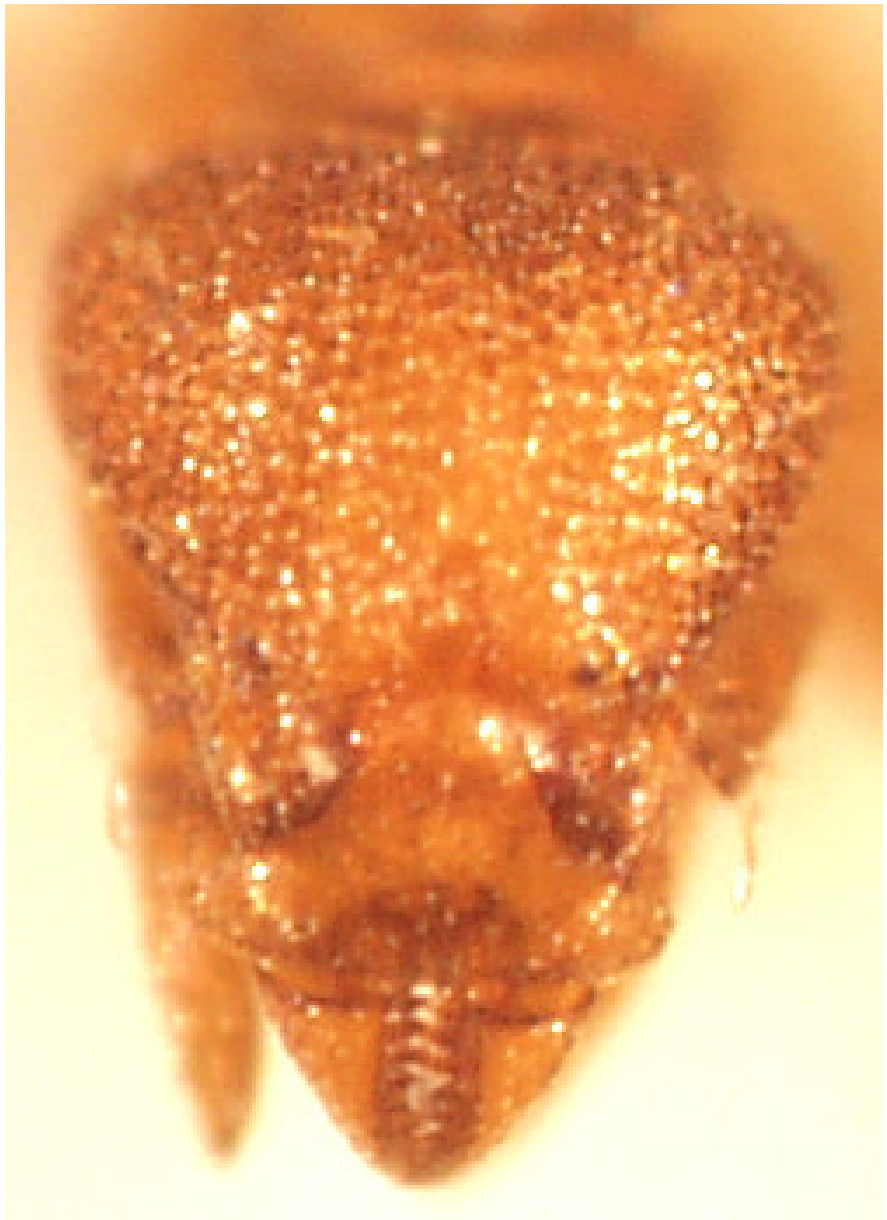


Pyramica (*Smithistruma*) *membranifera*

Description: Limbus present on first gastral tergite. Spongiform tissue on postpetiole. Labrum with exaggerated elongate distal lobes. Six antennal segments. No eyes. Stefan Cover says this is an exotic tramp species. **References:** Bolton (1999)

Pyramica (*Smithistruma*) *membranifera*

Pyramica (*Smithistruma*) *membranifera*

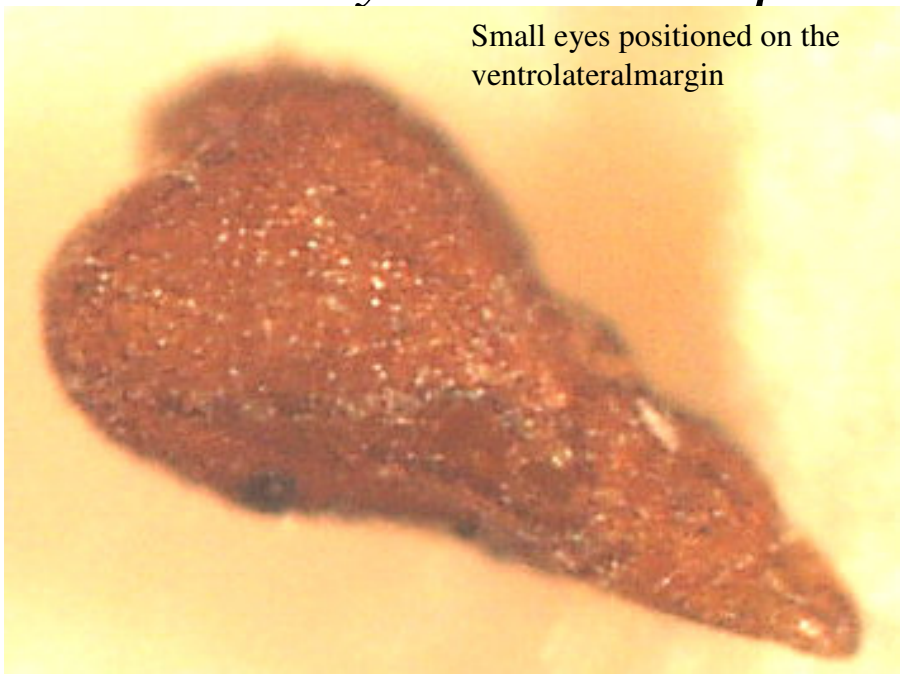


Pyramica (*Smithistruma*) nr. *apalachicolensis*

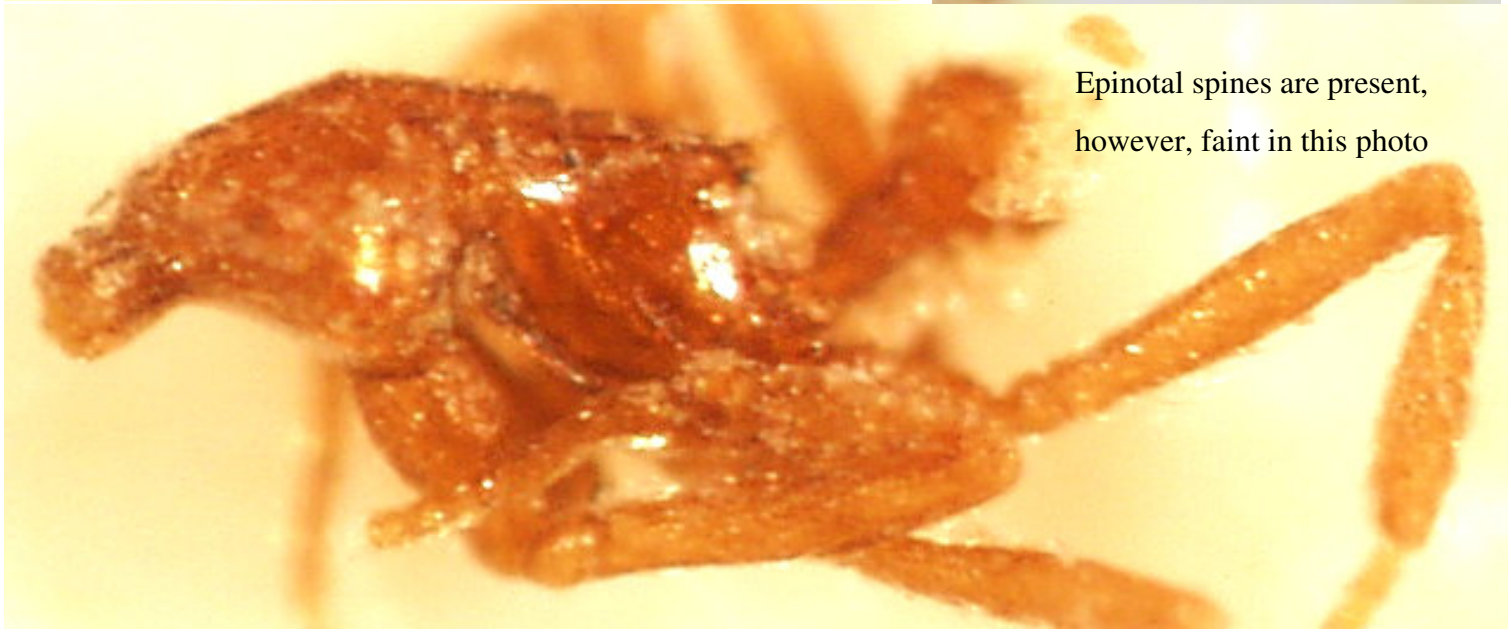
Deyrup and Lubertazzi

Description: Limbus present on first gastral tergite. Spongiform tissue on postpetiole. Labrum with exaggerated elongate distal lobes. Six antennal segments. Small eyes situated at ventrolateral margin. **References:** Brown, W. 1953.

Pyramica nr. *apalachicolensis* (continued)

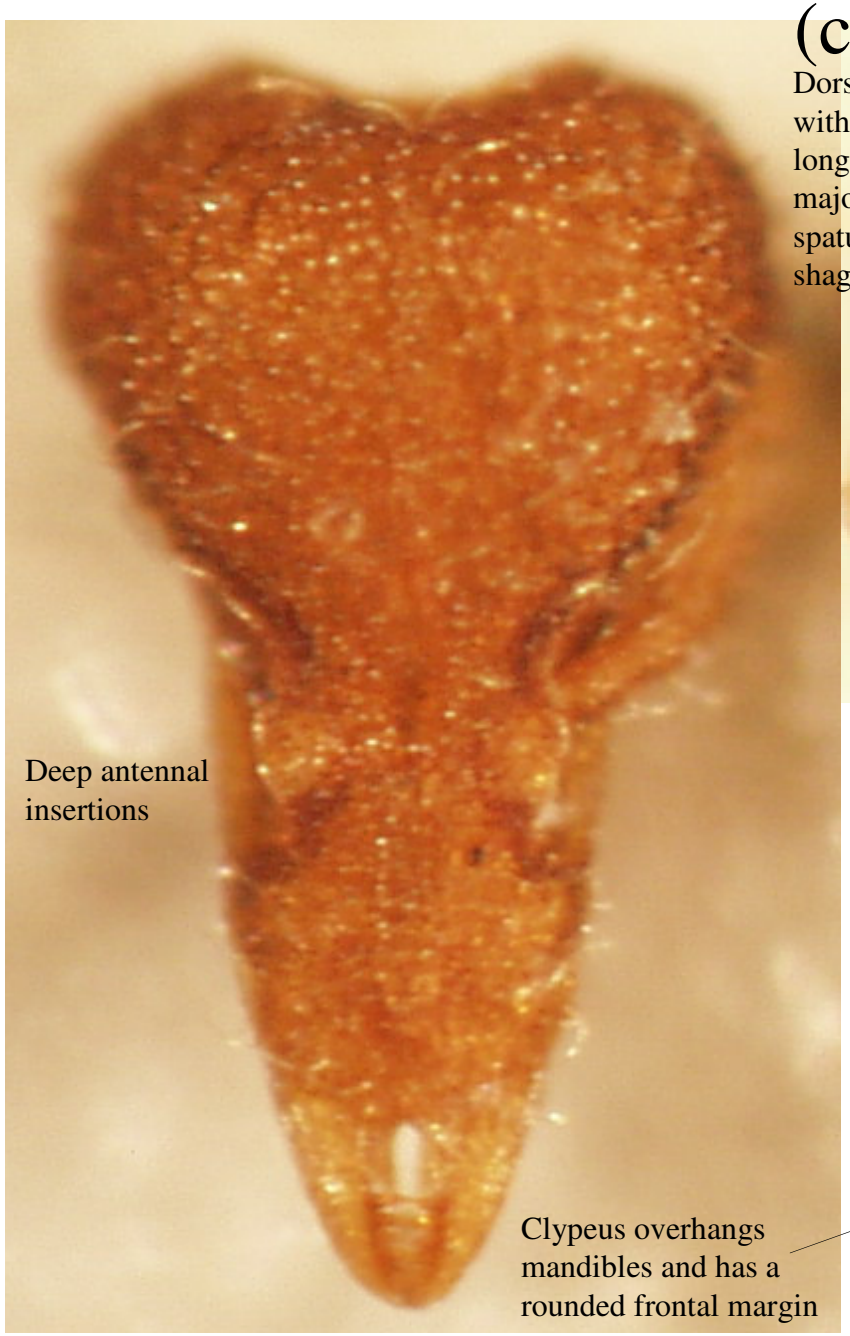


Small eyes positioned on the ventrolateralmargin



Epinotal spines are present, however, faint in this photo

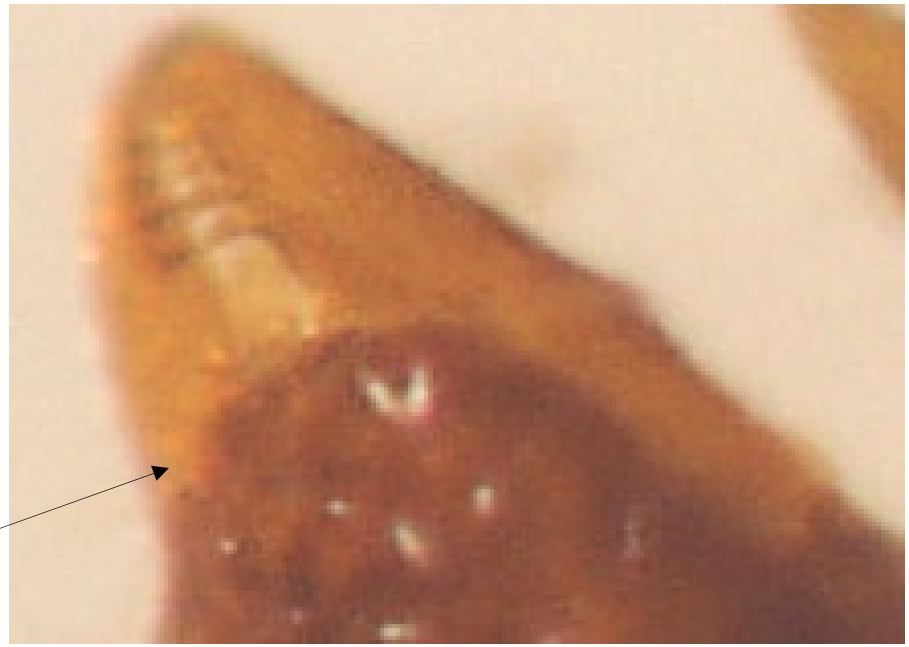
Pyramica (Smithistruma) nr. *apalachicolensis* (continued)



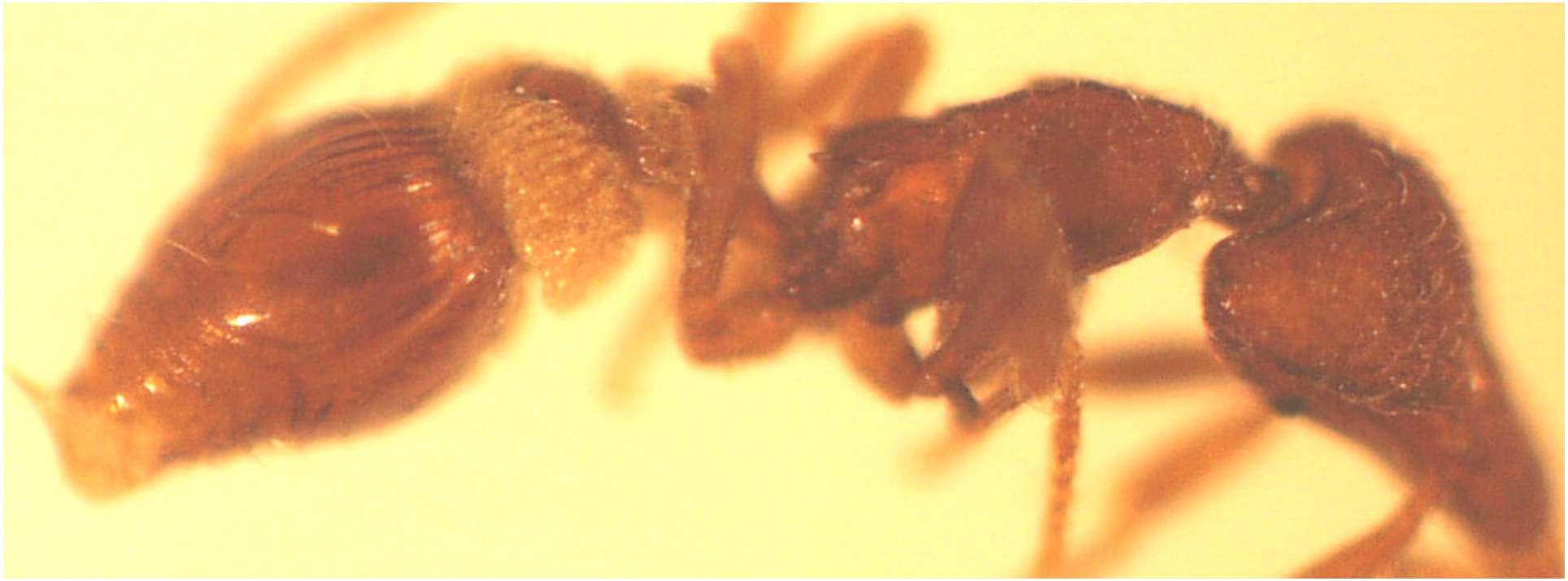
Deep antennal insertions

Clypeus overhangs mandibles and has a rounded frontal margin

Dorsum of head covered with many relatively long, curved hairs. The majority of which are **not** spatulate. Heavily shagreened surface.

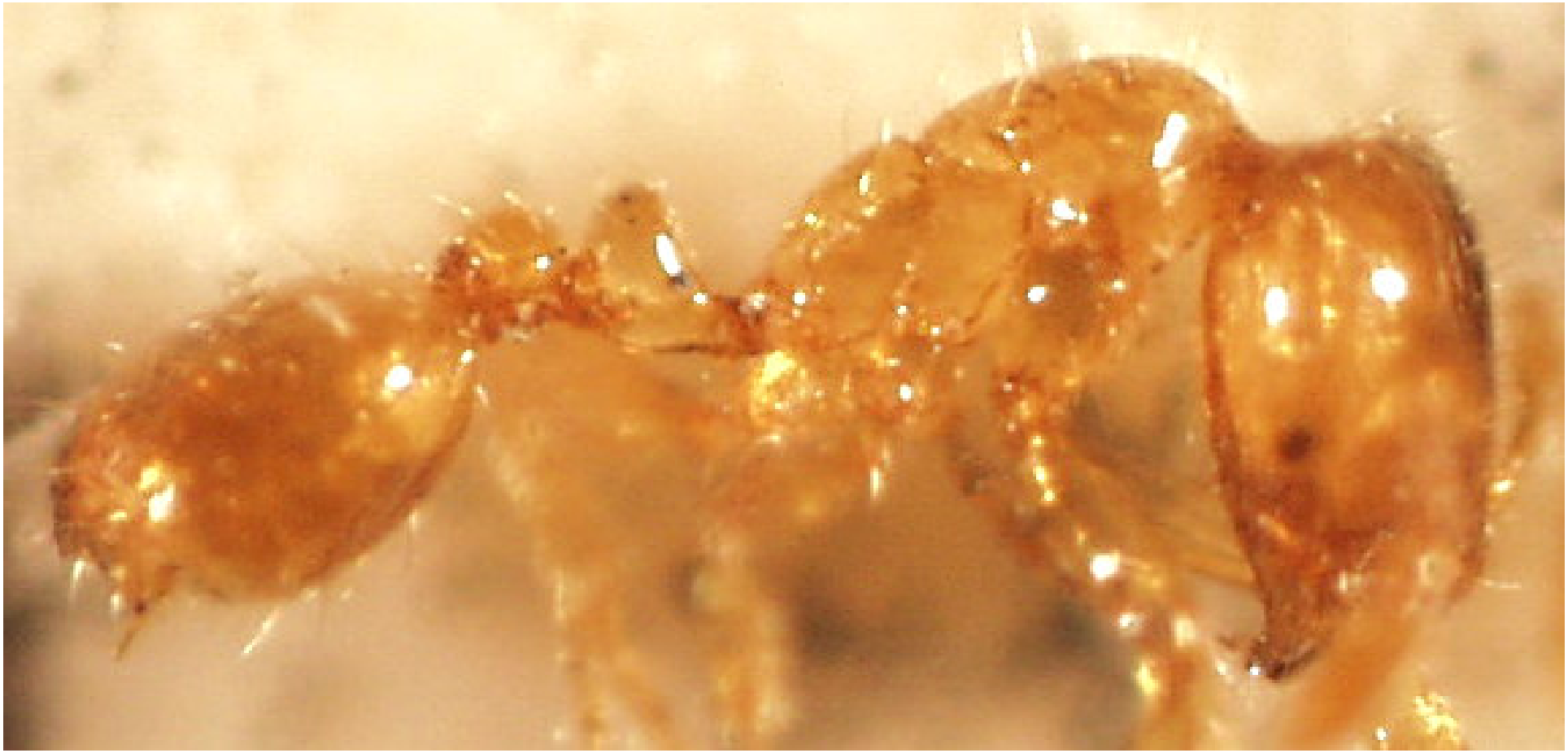


Pyramica (*Smithistruma*) nr. *apalachicolensis* (continued)



Solenopsis nr. carolinensis Forel

Description: Ten antennal segments. Prominent stinger. Color clear golden yellow. Very small (1.5-1.7 mm). There are several difficult species in the *Solenopsis molesta* complex. The nearest resemblance is *carolinensis*. **References:** Creighton (1950)

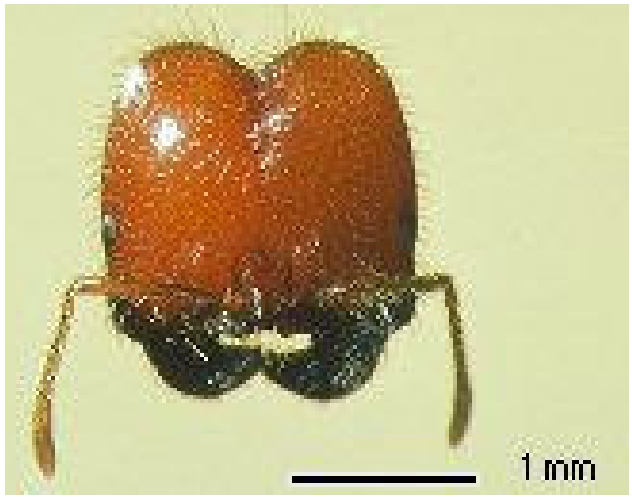


Solenopsis nr. carolinensis (Continued)

Solenopsis geminata Fabricius

Description: Ten antennal segments. Prominent stinger; preserved specimens often curled in a stinging pose. Majors with disproportionately large head with occipital lobes pronounced. Elevated carinae on either side of basal face of propodeum. Mesopleural flange broken into various projections. Medial clypeal tooth absent. Native fire ant. More likely in undisturbed woodlands than *S. invicta*.

References: Creighton (1950), Morisawa (2000)



No specimens collected. Images are from the Japanese Ant Database.

Solenopsis invicta Buren

Description: Ten antennal segments. Prominent stinger; preserved specimens often curled in a stinging pose. Majors with medium sized head with occipital lobes moderately enlarged. Petiole without a distinct tooth. Medial clypeal tooth usually present. Orange coloration. Imported fire ant, from Argentina. **References:** Creighton (1950), Morisawa (2000)

Major

Body of major and minor are very similar (except in size): difference is primarily in the shape of the head

Solenopsis invicta (continued)

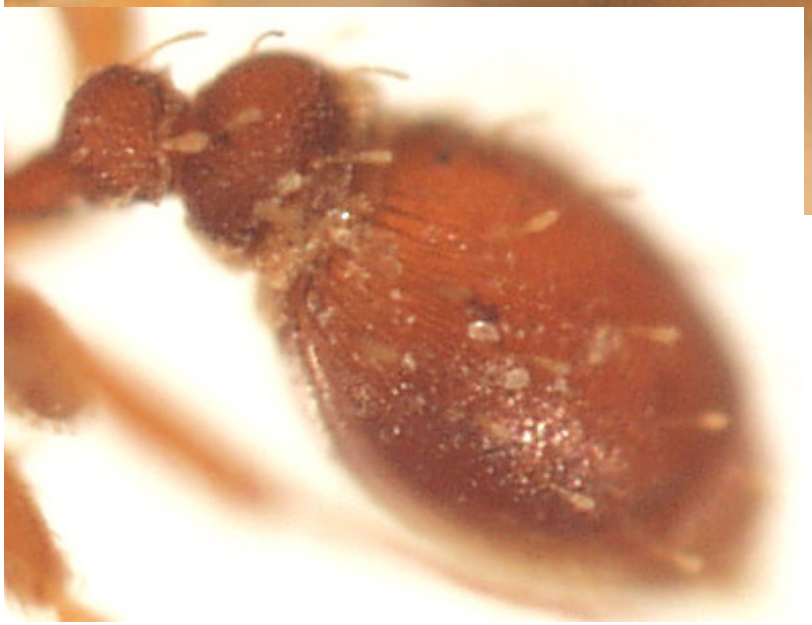
Solenopsis invicta (continued)

Queen with 11 antennal segments and clypeal teeth

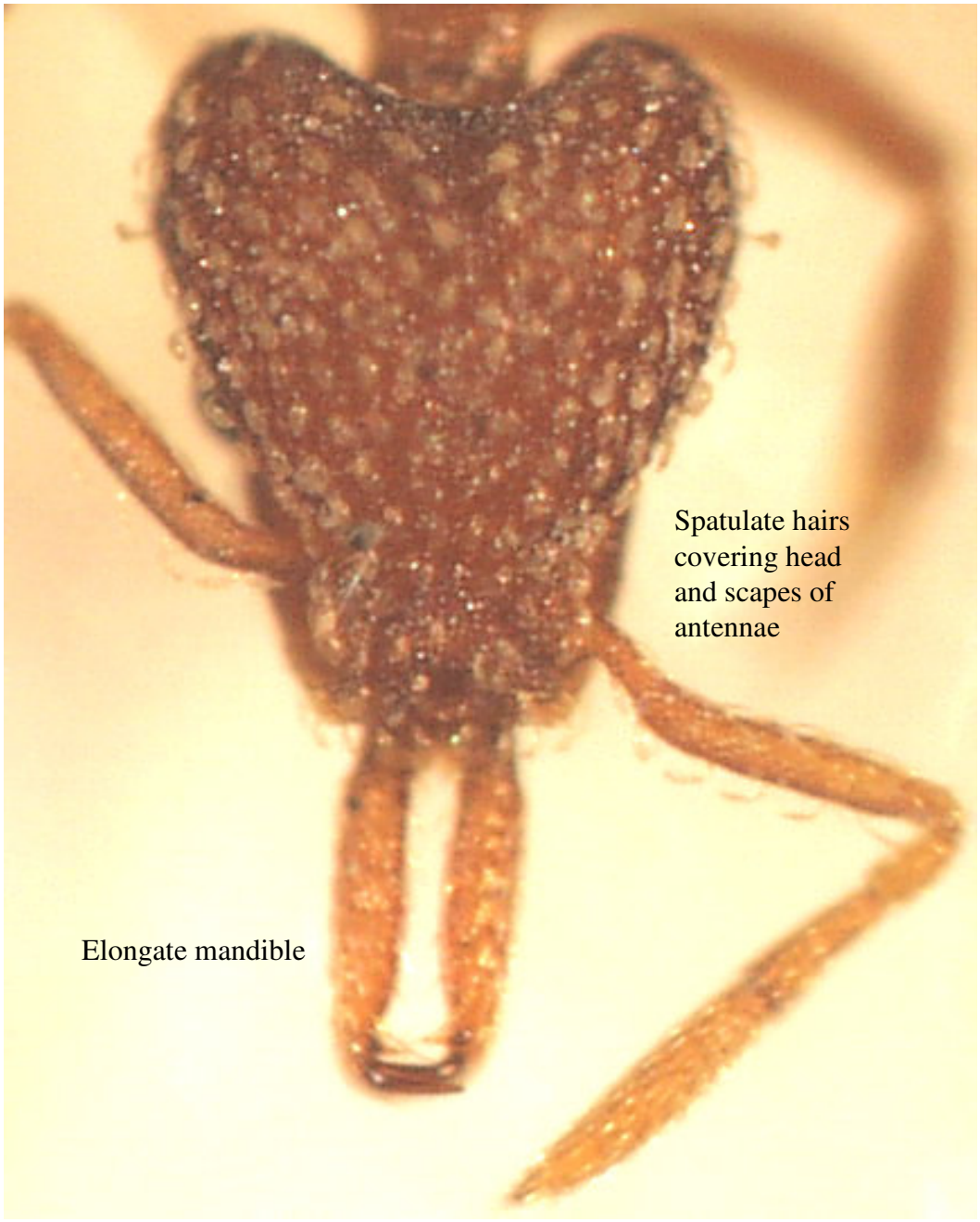
♀

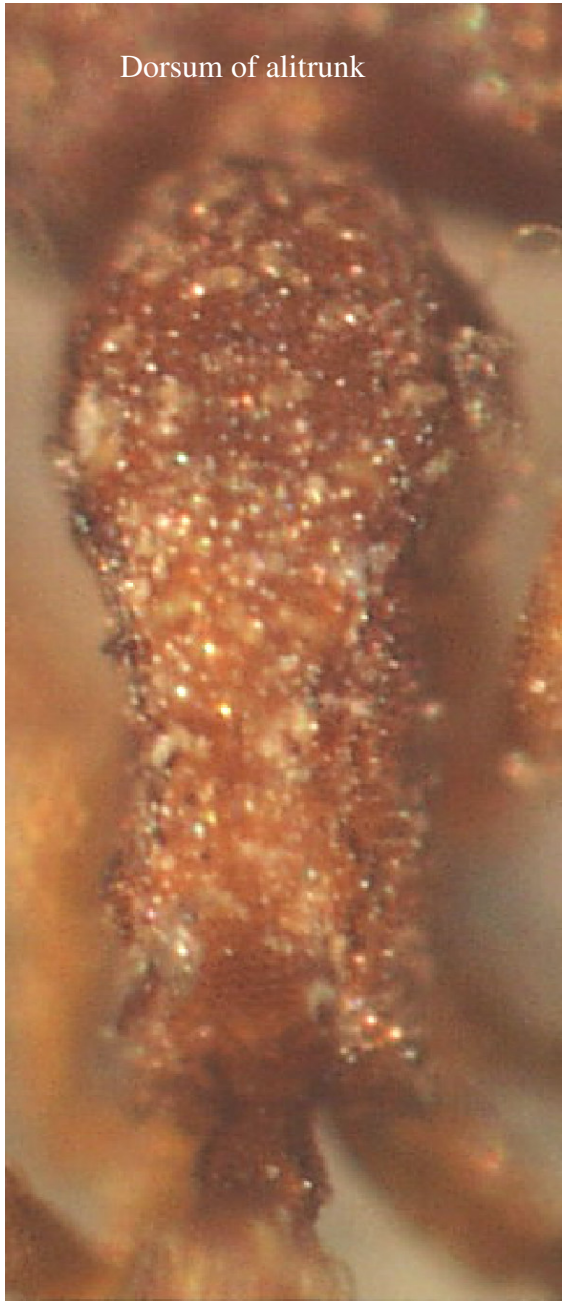
Strumigenys louisianae Roger

Description: Mandible elongate and linear. Apex of mandible with a fork of two teeth, one above the other. Antennae with 6 segments. **References:** Creighton (1950)



Strumigenys louisianae (Continued)





Temnothorax bradleyi Wheeler

Description: Petiole and postpetiole without spine-like protuberances. Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. 11 antennal segments. Scape reaches halfway between eyes and occipital corners. Rugae on mesosoma. Head longitudinally rugose. Stout propodeal spines. Nests in the bark of living pines.

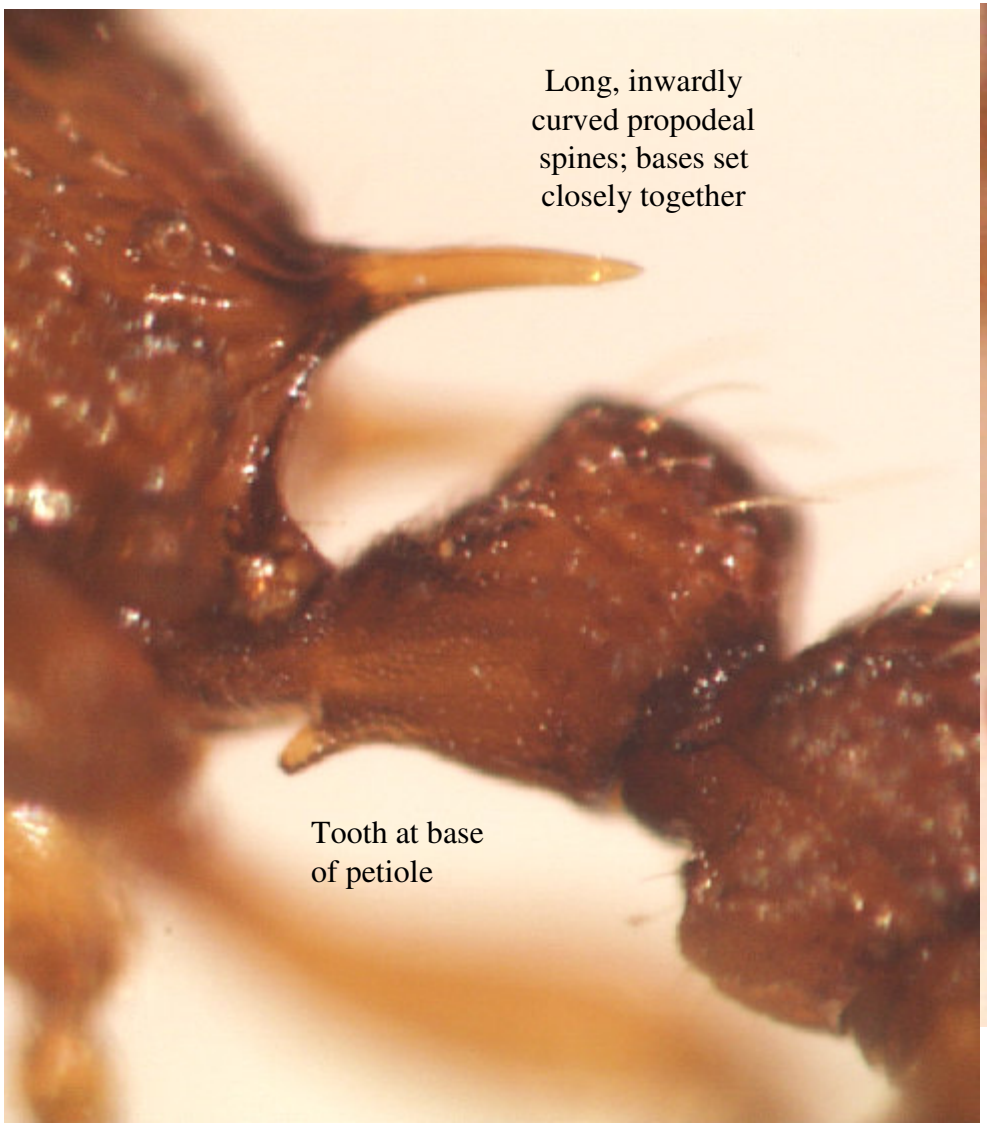
References: Creighton (1950), Mackay (2000)

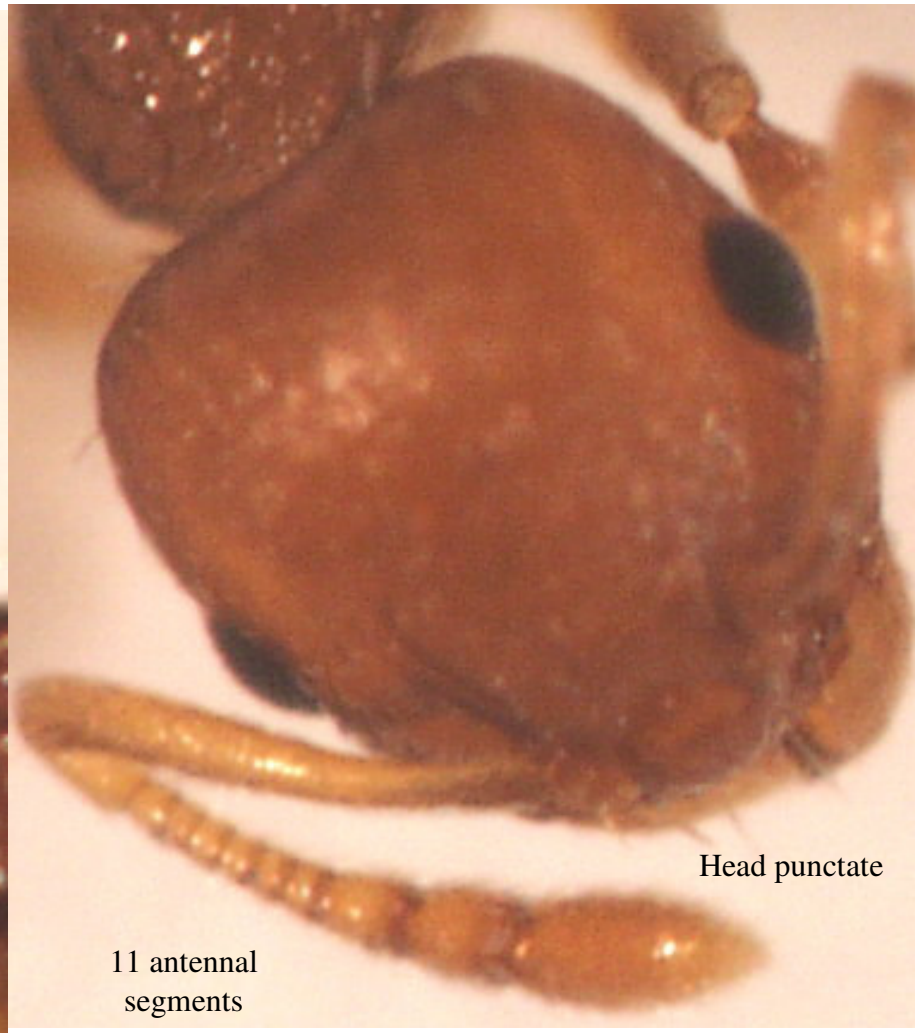
None collected

Temnothorax curvispinosus (Mayr)

Description: Petiole and postpetiole without spine-like protuberances. Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. 11 antennal segments. Rugae on mesosoma. Head coarsely punctate. Long, inwardly curved propodeal spines. Small and yellow. In same sample with *L. davisi* (*texanus*). **References:** Creighton (1950), Mackay (2000)

Temnothorax curvispinosus (Continued)





Temnothorax longispinosus (Roger)

Description: Petiole and postpetiole without spine-like protuberances. Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. 11 antennal segments. Rugae on mesosoma. Head coarsely punctate. Long, curved propodeal spines, lying nearly in the plane of the mesosoma (i.e. lying almost flat). Head smooth and glossy, with fine striolae. Small and brownish.

References: Creighton (1950), Mackay (2000)

None collected

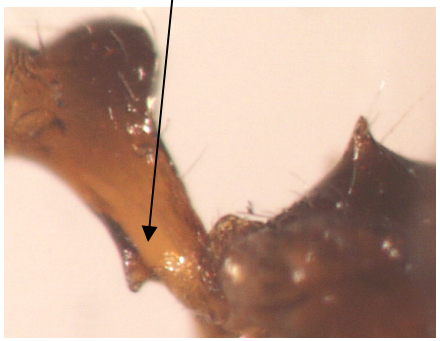
Temnothorax (*Dichothorax*) *pergandei* (Emery)

Description: Erect setae on head and thorax. Petiole and postpetiole without spine-like protuberances. Petiole with elongate peduncle. Mesosoma strongly arched and mesopropodeal suture deeply impressed. 12 antennal segments. Head and mesosoma smooth and shining. Gaster smooth and shining. Short propodeal spines. Head smooth and glossy. Piceous brown. Only species in the subgenus *Dichothorax*; highly variable in color, pilosity, sculpture, size, and shape.

References: MacKay (1993), Mackay (2000)

Elongate peduncle

Peduncle tooth



Temnothorax (*Dichothorax*) *pergandei* (Continued)

Temnothorax (*Dichothorax*) *pergandei* (Continued)

Temnothorax schaumii (Roger)

Description: Petiole and postpetiole without spine-like protuberances. Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. 11 antennal segments. Top of mesosoma punctate with a few striae. Head nearly completely covered with fine striae. Propodeal spines range from tiny angles to small spines. Petiole and postpetiole punctate. Dark brown, occasional yellow.

References: Creighton (1950), Mackay (2000)

None collected

Temnothorax texanus (Wheeler)

Description: Petiole and postpetiole without spine-like protuberances. Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. 12 antennal segments. Rugae and sculpting on head and alitrunk. Postpetiole very wide—more than 1/2 the width of the gaster. Propodeal spines ½ the length of the distance between their tips. Nests in driest habitats. [Deyrup and Cover synonymized *davisi* with *texanus* in 2004.]

References: Creighton (1950), Deyrup and Cover (2004), Mackay (2000)

12 segments

Temnothorax texanus (Continued)

Temnothorax tuscaloosae (Wilson)

Description: Continuous and shallowly convex alitrunk with rugules. Erect setae on head and thorax. Petiole and postpetiole without spine-like protuberances. 11 antennal segments. Head and mesosoma smooth and shining. Gaster smooth and shining. Long, slender propodeal spines. Head smooth and glossy, with fine striolae. Small and dark. From only two localities (Alabama, North Carolina)

References: Creighton (1950), Mackay (2000)

None collected

Trachymyrmex septentrionalis Wheeler

Description: Promesonotal dorsum with numerous prominences, tubercles, teeth, or spines. Antennal fossa bounded by a delicate carina that runs diagonally inward from the mandibular insertion past the medial border of the eye. Color, yellowish-brown. A white crystalline deposition accumulates on the surface when it is dry. This is a fungus-growing ant. **References:** Creighton (1950)

Trachymyrmex septentrionalis cont'd

Trachymyrmex septentrionalis (Continued)

Dolichoderinae

Description: One reduced segment between alitrunk and gaster. No acidopore or sting.

Dorymyrmex bossutus (Trager)

Description: An upward tooth-like protuberance projects from the epinotum. Clypeal setae project beyond the closed mandibles. Apical mandibular tooth enlarged. Psammophore present. Mesonotal profile with distinct dorsal and declivatous faces that meet in an angle. Vertex of head convex. Color is variable: head and gaster usually darker than thorax. Posterior face of mesonotum nearly vertical, giving the ant a hunchbacked appearance (hence the name *bossutus*). This is one of the smaller species of *Dorymyrmex* (< 3.25 mm). Worker small and shiny. Trager uses the name *bossuta*.

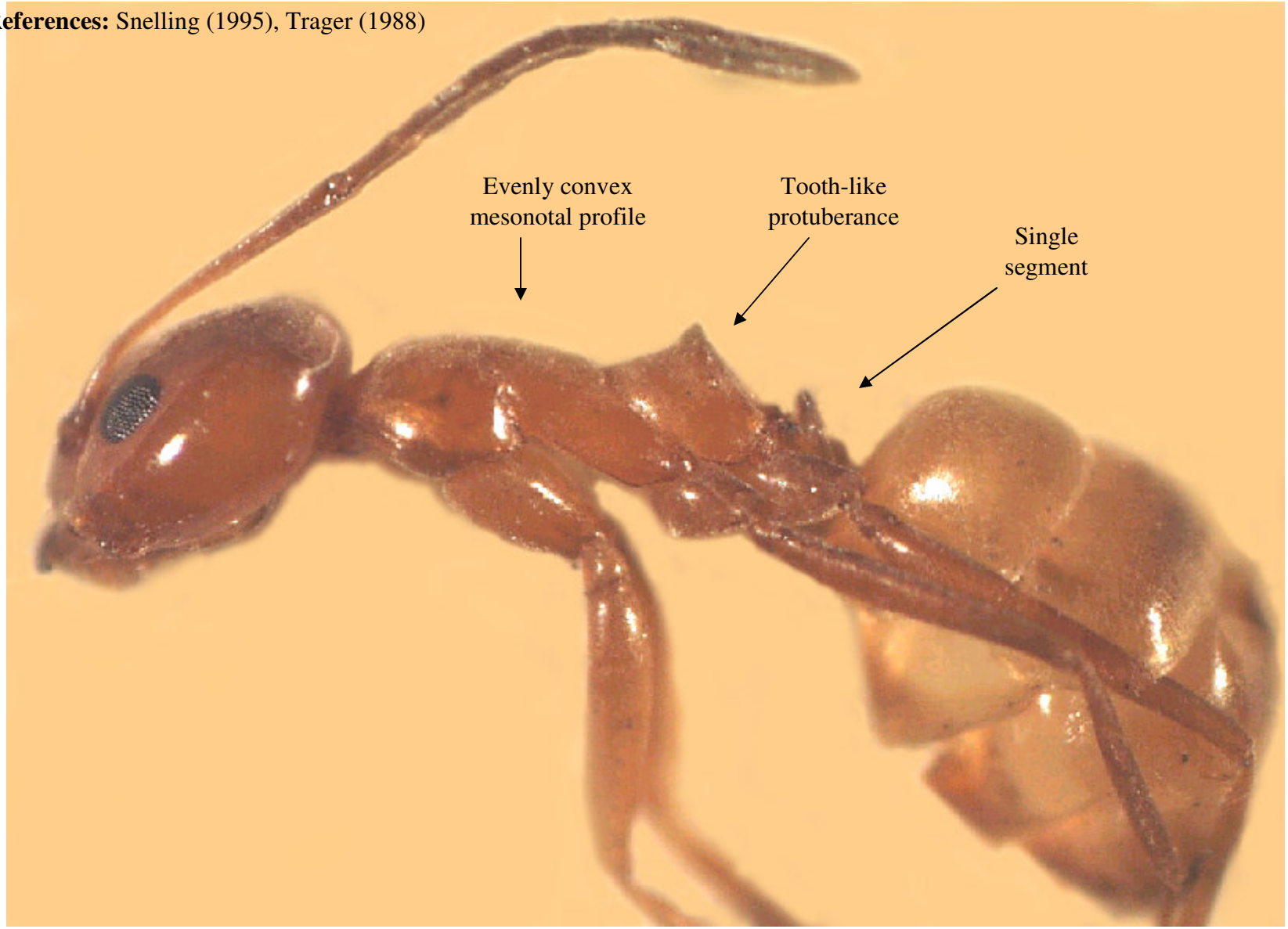
References: Snelling (1995), Trager (1988)

No specimens collected

Dorymyrmex bureni (Trager)

Description: An upward tooth-like protuberance projects from the epinotum. Clypeal setae project beyond the closed mandibles. Apical mandibular tooth enlarged. Psammophore present. Mesonotal profile evenly convex. Head relatively broad. Scape index less than 112. Variable coloration (yellow – reddish yellow). Prefers open, exposed habitats, such as lawns in the cantonment at Fort Benning. But in the sandhills, it is most abundant in undisturbed woodland.Very active. May hybridize with *D. smithi*.

References: Snelling (1995), Trager (1988)



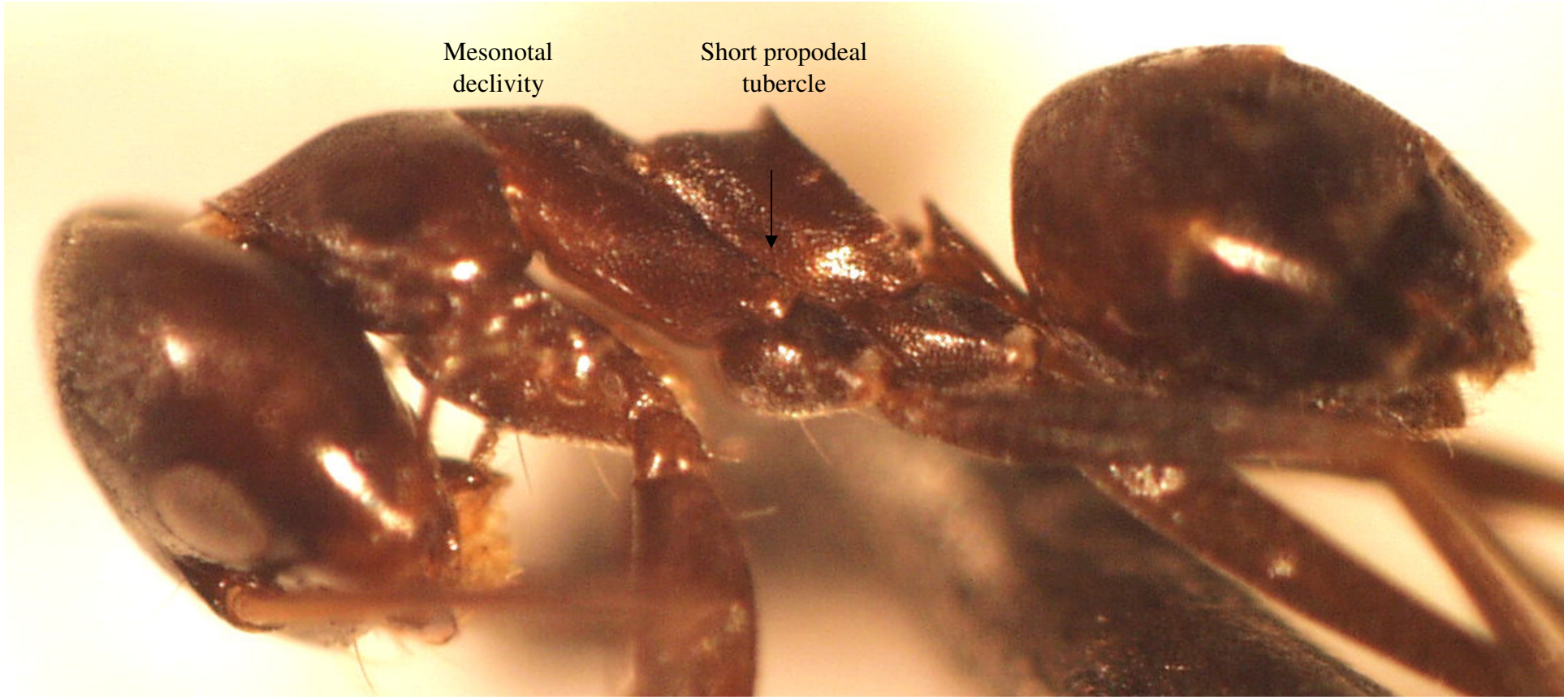
Dorymyrmex bureni (Continued)

Enlarged apical tooth

Dorymyrmex grandulus (Forel)

Description: An upward tooth-like protuberance projects from the epinotum. Clypeal setae project beyond the closed mandibles. Apical mandibular tooth enlarged. Psammophore present. Mesonotal profile with distinct dorsal and declivitous faces that meet in an angle. Abundant appressed pubescence on head. Head relatively narrow. Vertex margin straight or slightly convex. Propodeal tubercle short. Color yellowish-brownish. Very similar to *D. smithi*, but can be distinguished by propodeal tubercle, head width, and vertex in frontal view. According to James Trager, there is considerable variation in the mesosomal profile; some grandulus have laarger propodeaal tubercles. Head shape, though, is distinctive. At Fort Benning, it occurs in pine woodlands.

References: Snelling (1995), Trager (1988)



Dorymyrmex grandulus (Continued)

***D. smithi*:** Wider head than *grandulus*, the posterior margin is broadly and shallowly concave.

***D. grandulus*:** Narrower head than *smithi*. Posterior margin of the head is relatively straight.

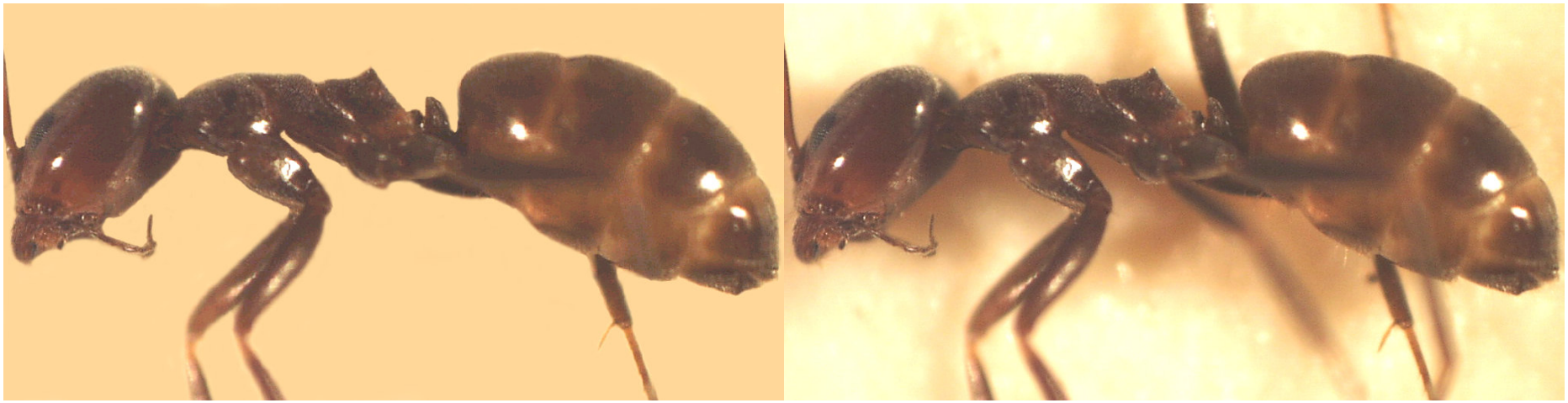
Dorymyrmex smithi Cole

Description: An upward tooth-like protuberance projects from the epinotum. Clypeal setae project beyond the closed mandibles. Apical mandibular tooth enlarged. Psammophore present. Mesonotal profile with distinct dorsal and declivatous faces that meet in an angle. Abundant appressed pubescence on head. Head relatively broad. Head and mesonoma dark brown-black. Vertex of head concave. Prefers open, exposed habitats. Very active. Other species expected in this area include *D. smithi* and *D. grandulus*. Very similar to *D. grandulus*, but can be distinguished by propodeal tubercle, head width, and vertex in frontal view. Abundant in disturbed sites. Mark Deyrup thinks this species is different from the western *smithi*, and uses Trager's designation *D. medee* (*Conomyrma medeis*). **References:** Snelling (1995), Trager (1988)

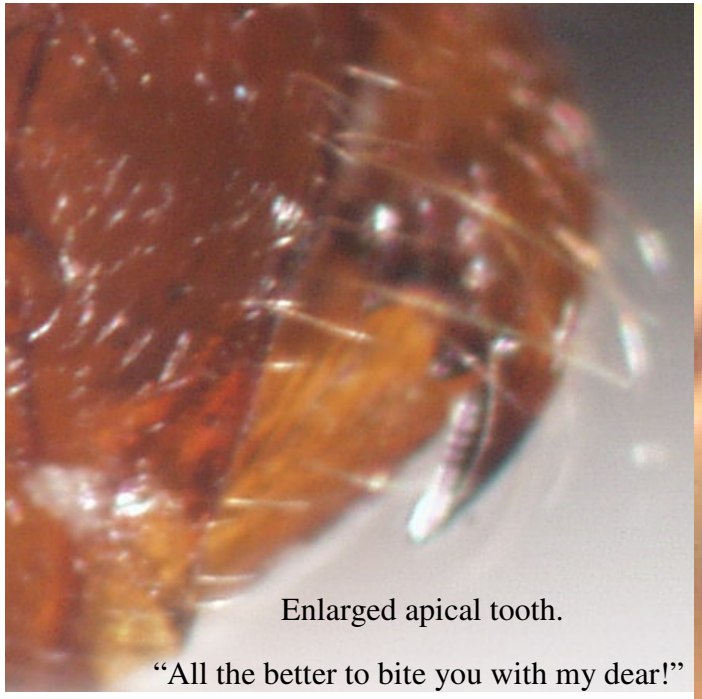
Angle at meeting of dorsal and declivitous faces of mesonotum

Large propodeal tubercle

Abundant appressed pubescence



Dorymyrmex smithi cont'd



Enlarged apical tooth.

"All the better to bite you with my dear!"
HAHAHA!!!!!

Forelius pruinosus Roger

Description: 2-12 ventrally curved clypeal setae. First gastric tergite projects anteriorly over the petiole. Silver pubescence covers dorsum and is observed when the surface of the ant is dry. Brown coloration. **References:** Creighton (1950)

Forelius pruinosus (Continued)

Formicinae

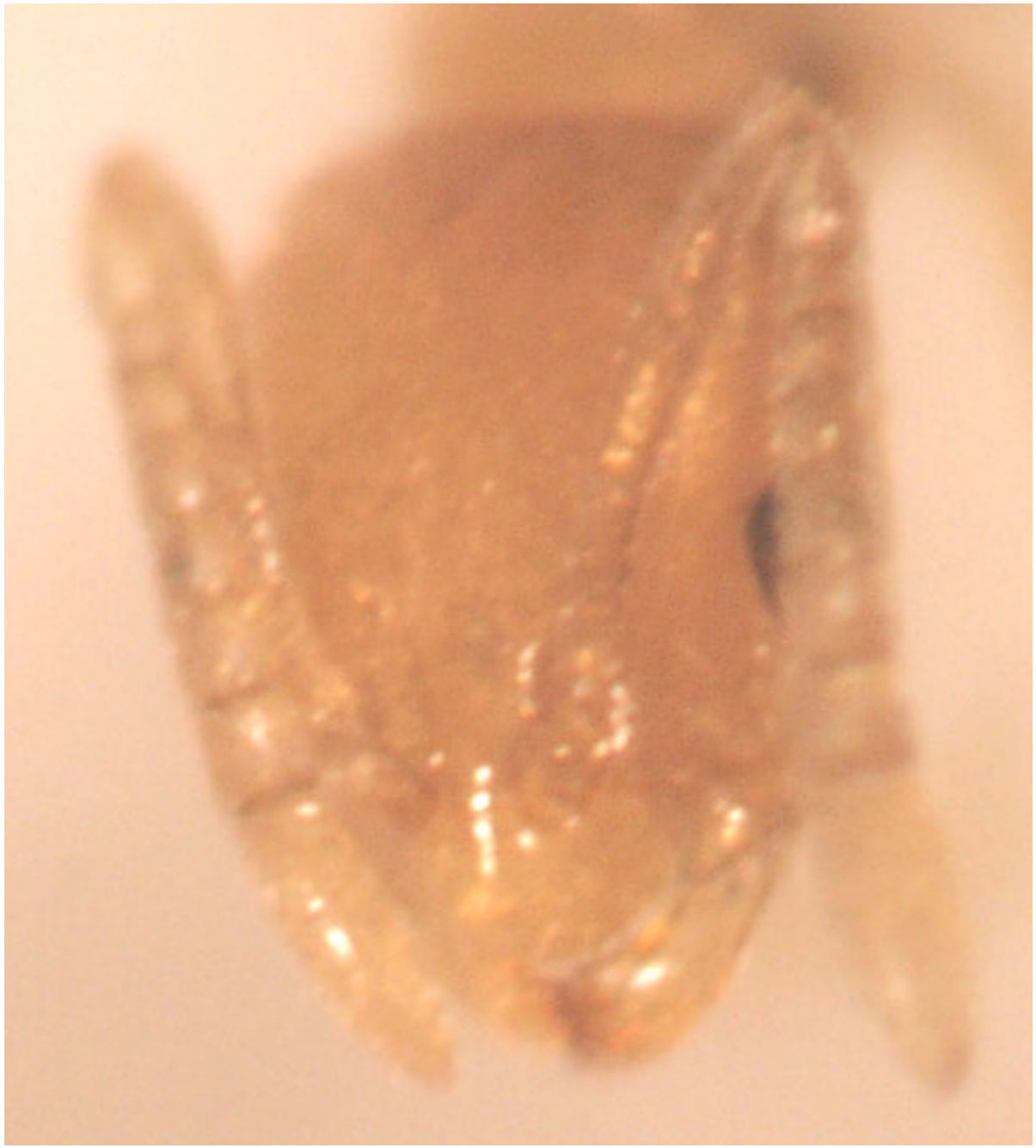
Description: Abdominal pedicel in one segment. Acidopore present.

Brachymyrmex depilis Emery

Description: Antenna with 9 segments, and not ending in a club. Small size: 1-2 mm in length. Gaster is usually twice the length of the head and thorax. No bristles on dorsum of alitrunk. Dense pubescence on gaster. Light yellow color. 1.1 mm. [According to Stefan Cover, there is probably more than one species of yellow *Brachymyrmex*.]

References: Creighton (1950)

Brachymyrmex depilis (Continued)



Brachymyrmex obscurior Forel

Description: According to Stefan Cover, *B. obscurior* is brownish or grayish, weaking shining or not shining, whereas *musculus* is dark brownish or blackish and pretty shining. We have not seen any *Brachymyrmex* fitting this description.

None collected.

Brachymyrmex patagonicus Mayr

Description: Antenna with 9 segments, and not ending in a club. Small size: 1-2 mm in length. Gaster is usually twice the length of the head and thorax. Two pairs of bristles on dorsum of alitrunk. No dense pubescence on gaster. Dark brown color. Certain individuals may display a light yellow coloration, similar to dipilis, however all other morphological features suggest musculus. 1.4-1.7 mm. Previously identified as *B. musculus*.

References: Creighton (1950)

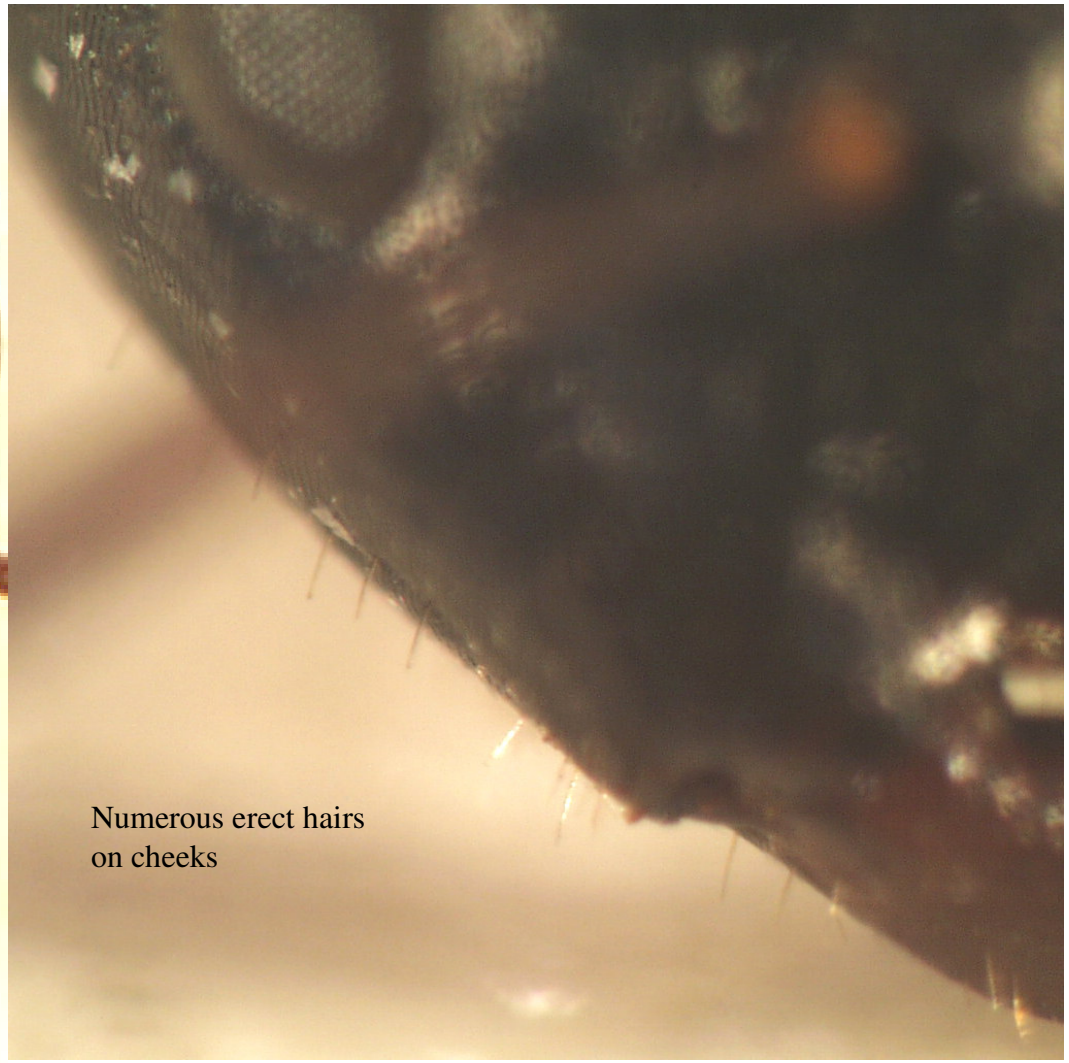
Brachymyrmex patagonicus cont'd

Camponotus caryae (Fitch)

Description: 12 antennal segments. Antennal scapes inserted well behind posterior edge of the clypeus. Alitrunk profile is continuous and evenly convex. Head quadrate, not truncate. Anterior femur not noticeably wider than posterior femur. Anterior edge of clypeus notched. Cheeks with numerous erect hairs. Gaster with fine, non-overlapping, appressed hairs. Color black, gaster casting bluish reflections.

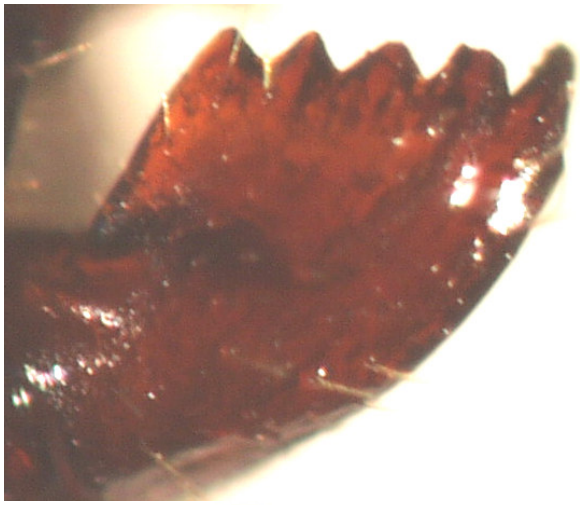
References: Creighton (1950), Wheeler (1910), Mackay (from web site)

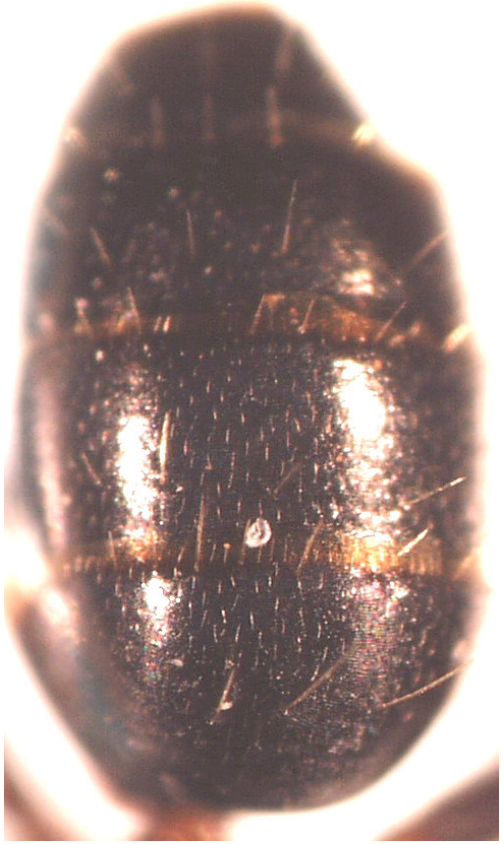
Camponotus caryae cont'd

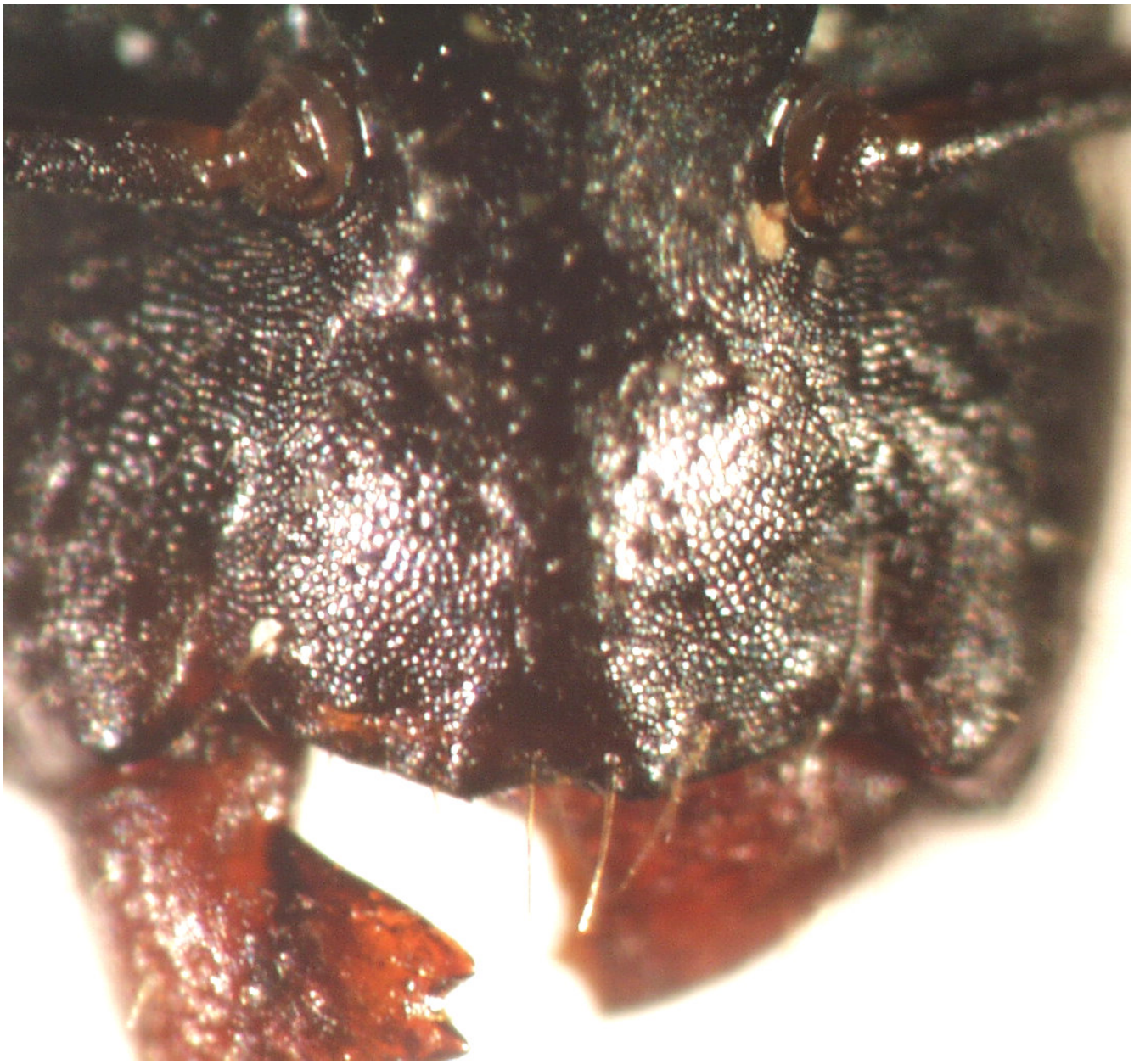


Numerous erect hairs
on cheeks

Camponotus Caryae cont'd







Camponotus castaneus Latreille

Description: 12 antennal segments. Antennal scapes inserted well behind posterior edge of the clypeus. Alitrunk profile is continuous and evenly convex. Clypeus distinctly carinate. Antennal fossa shallow; head longer than broad. Occipital corners without erect hairs. Thorax, cheeks, and gaster strongly shining; inconspicuous punctures on cheeks. Yellowish red coloration; head and gaster often darker; hairs yellow and long along the border of the clypeus. According to Mark Deyrup, *castaneus* in the southern part of its range can have a dark head. To distinguish it from *americanus*, look for an absence of cheek hairs.

References: Creighton (1950), Wheeler (1910), Mackay (from web site)

Camponotus castaneus (Continued)

Camponotus chromaiodes Bolton

Description: 12 antennal segments. Antennal scapes inserted well behind posterior edge of the clypeus. Alitrunk profile is continuous and evenly convex. Clypeus distinctly carinate. Antennal fossa shallow; head longer than broad. Occipital corners without erect hairs. Thorax, cheeks, and gaster strongly shining; inconspicuous punctures on cheeks. Golden appressed hairs (overlapping) on gaster. 1st tergite golden brown; others dark brown to black. Larger head than other species of *Camponotus*.

References: Creighton (1950), Wheeler (1910), Mackay (from web site)

Camponotus chromaiodes (Continued)

Hairless Cheeks

Camponotus (*Colobopsis*) *impressus* (Roger)

Description: Antenna with 12 segments. Head obliquely truncate anteriorly. Anterior femur swollen. Metanodal suture deeply impressed. Propodeum of minor moderately angulate between faces.

References: Creighton (1950), Wheeler (1910)**,** Mackay (from web site)

Camponotus (*Colobopsis*) *impressus* (Continued)

Camponotus pennsylvanicus De Geer

Description: 12 antennal segments. Antennal scapes inserted well behind posterior edge of the clypeus. Alitrunk profile is continuous and evenly convex. Clypeus acarinate. Head broader than long. Dense pubescence on gaster. Color dull black, with pale yellow or white pubescence. **References:** Creighton (1950), Wheeler (1910), Mackay (from web site)

1st gastral tergite black

Dense pubescence on gaster

Camponotus pennsylvanicus (Continued)

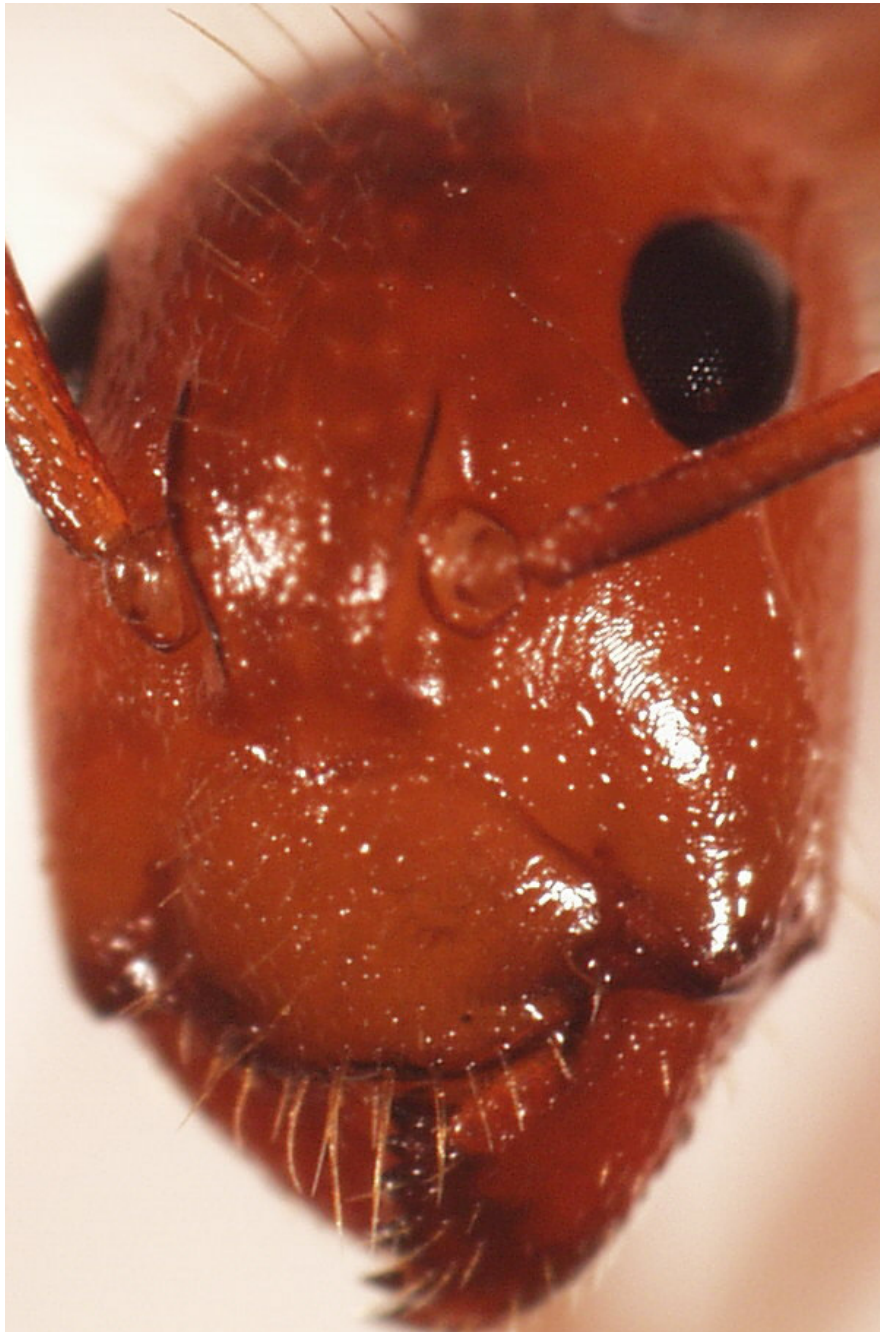
Camponotus pennsylvanicus cont'd

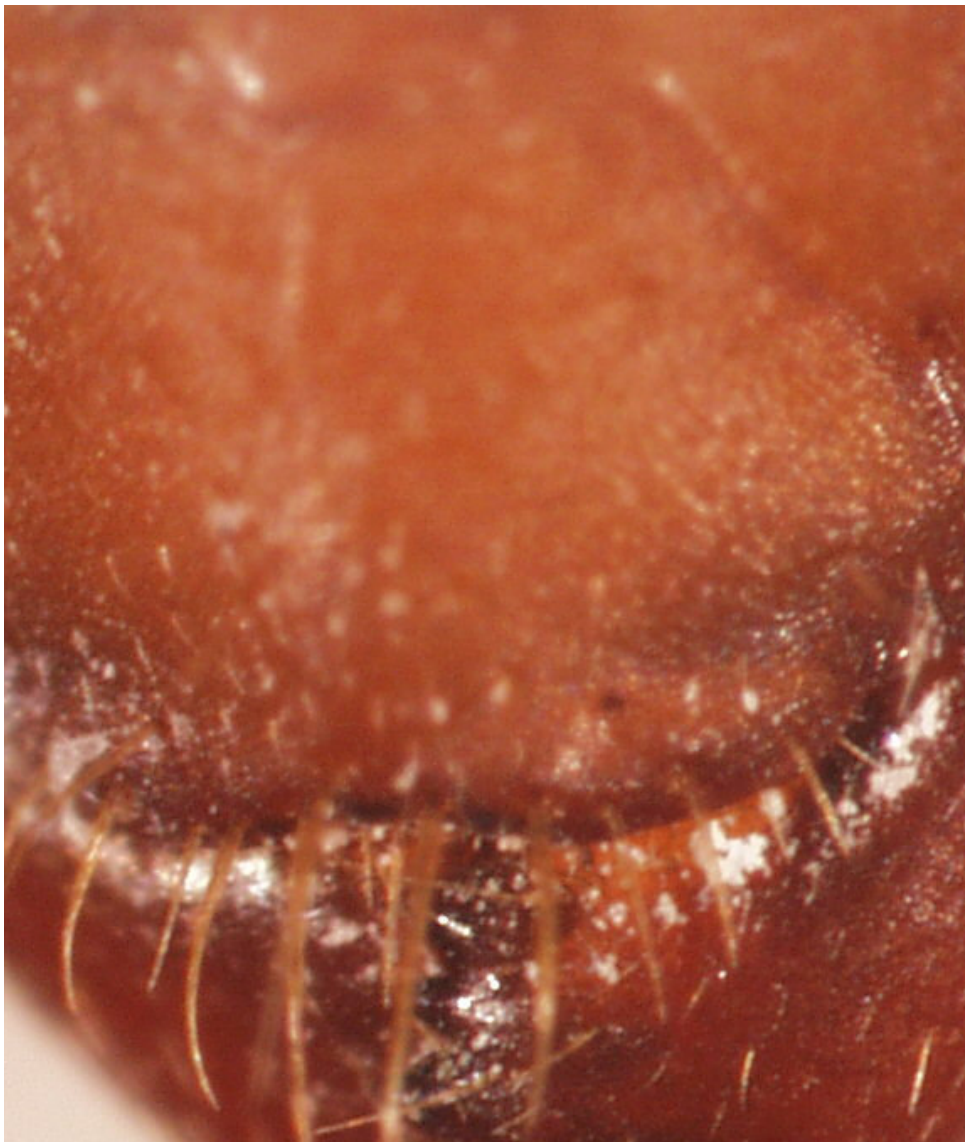
Camponotus socius Roger

Description: 12 antennal segments. Antennal scapes inserted well behind posterior edge of the clypeus. Alitrunk profile is continuous and evenly convex. Head not truncate. Anterior femur not noticeably wider than posterior femur. Anterior edge of clypeus entire, not notched. Cheeks without numerous erect hairs. Gaster with fine, non-overlapping, appressed hairs. Color of head and alitrunk—reddish brown. Transverse stripes on gaster (light and dark brown).

References: Creighton (1950), Wheeler (1910), Mackay (from web site)

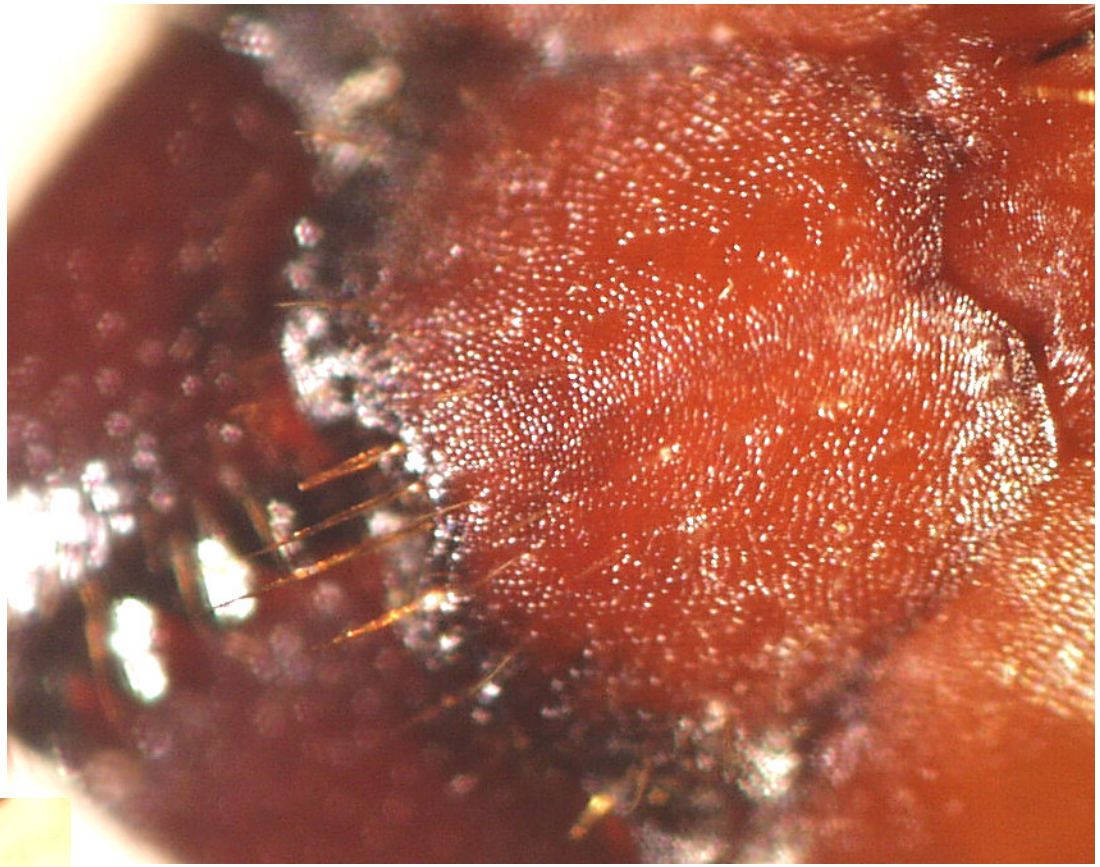
Camponotus socius (Continued)





Camponotus socius (continued)

Major



Formica (Neoformica) pallidefulva Latreille

Description: Antenna with 12 segments. Antennal sockets close to margin of the clypeus. Transverse sulcus behind the helicium. Triangular mandible. Palp formula—6,4. Three ocelli in a triangular pattern on head between eyes. Yellow color.

References: Creighton (1950)

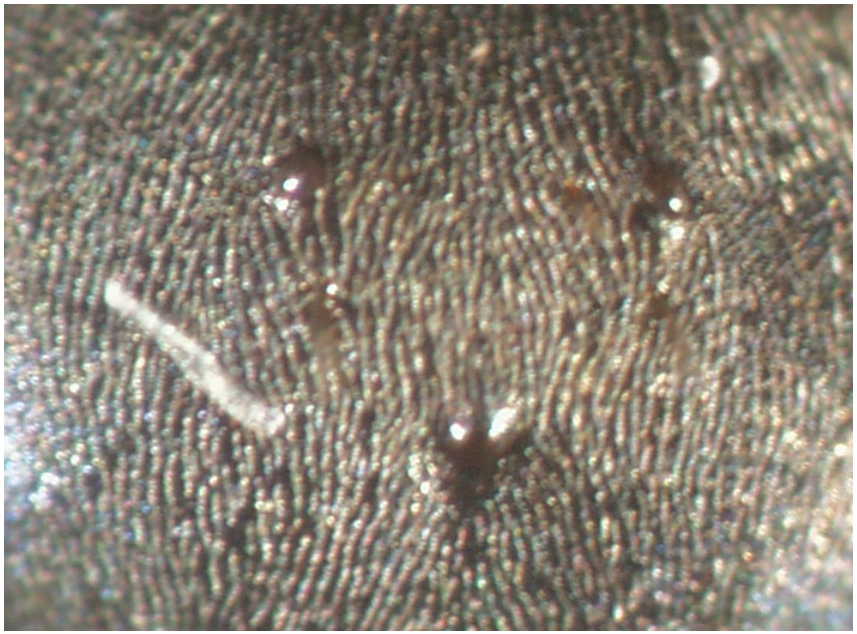
Formica (Neoformica) pallidefulva (Continued)

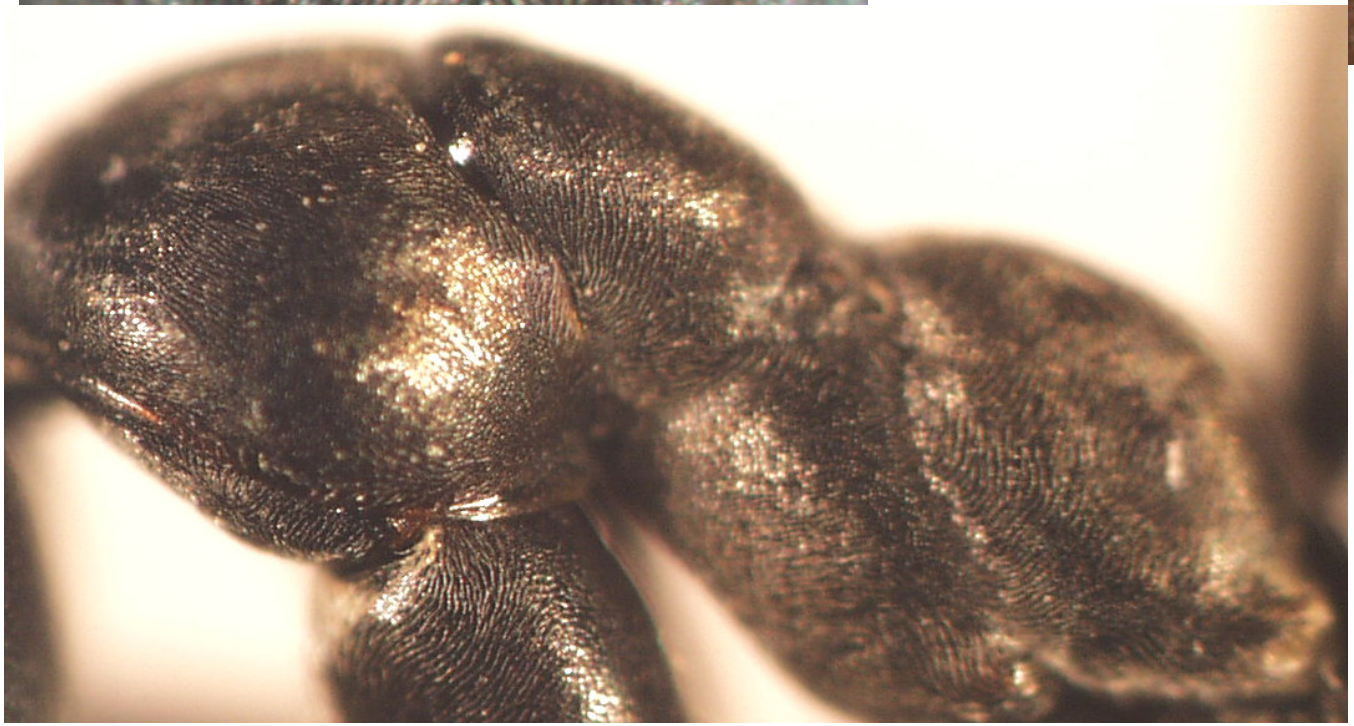
Formica subsericea Say

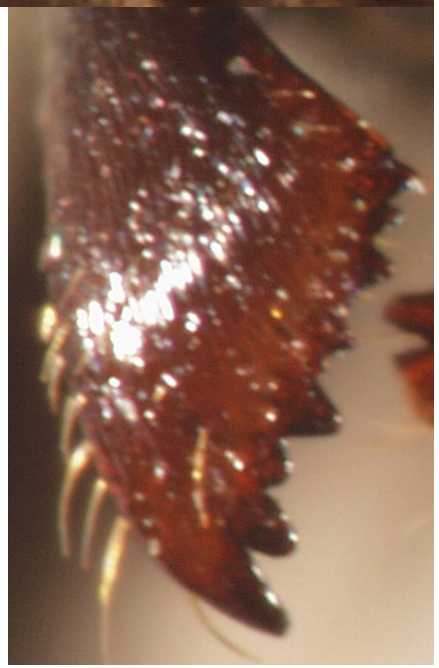
Description: Antenna with 12 segments. Antennal sockets close to margin of the clypeus. Transverse sulcus behind the helicium. Triangular mandible. Palp formula—6,4. Three ocelli in a triangular pattern on head between eyes. Black color.

References: Creighton (1950)

Formica subsericea (Continued)





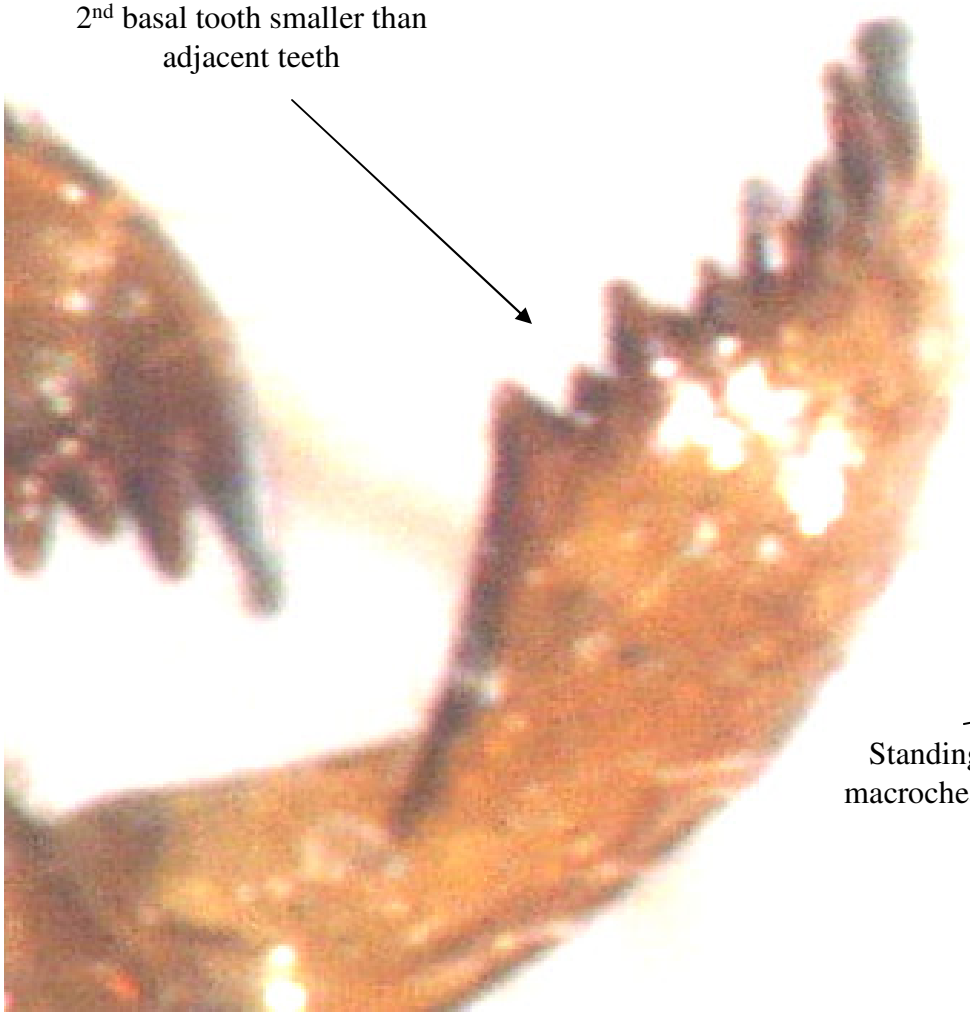


Lasius neoniger Emery

Description: Antenna with 12 segments and standing hairs on scapes. Relatively large eyes (10+ oscillae) usually with approximately 14 oscillae. Mandibles have non-offset teeth with the second basal tooth smaller than two adjacent. Mesonotal declivity present as well as a fine silverish pubescence when dry.

References: MacKay & MacKay: Published key to the Genus *Lasius*

2nd basal tooth smaller than adjacent teeth



Standing macrocheate

Lasius neoniger (Continued)

Paratrechina arenivaga Wheeler

Description: Antenna with 12 segments. Paired macrochaetae on body and head. Head densely pubescent. Yellow with gaster infuscated posteriorly. Thoracic pilosity flexuous and dark brown (notably darker than body color). Scapes with 5-17 macrochaetae and suberect pubescence. **References:** Creighton (1950), Trager (1984)

Paratrechina arenivaga (Continued)

Paratrechina concinna Trager

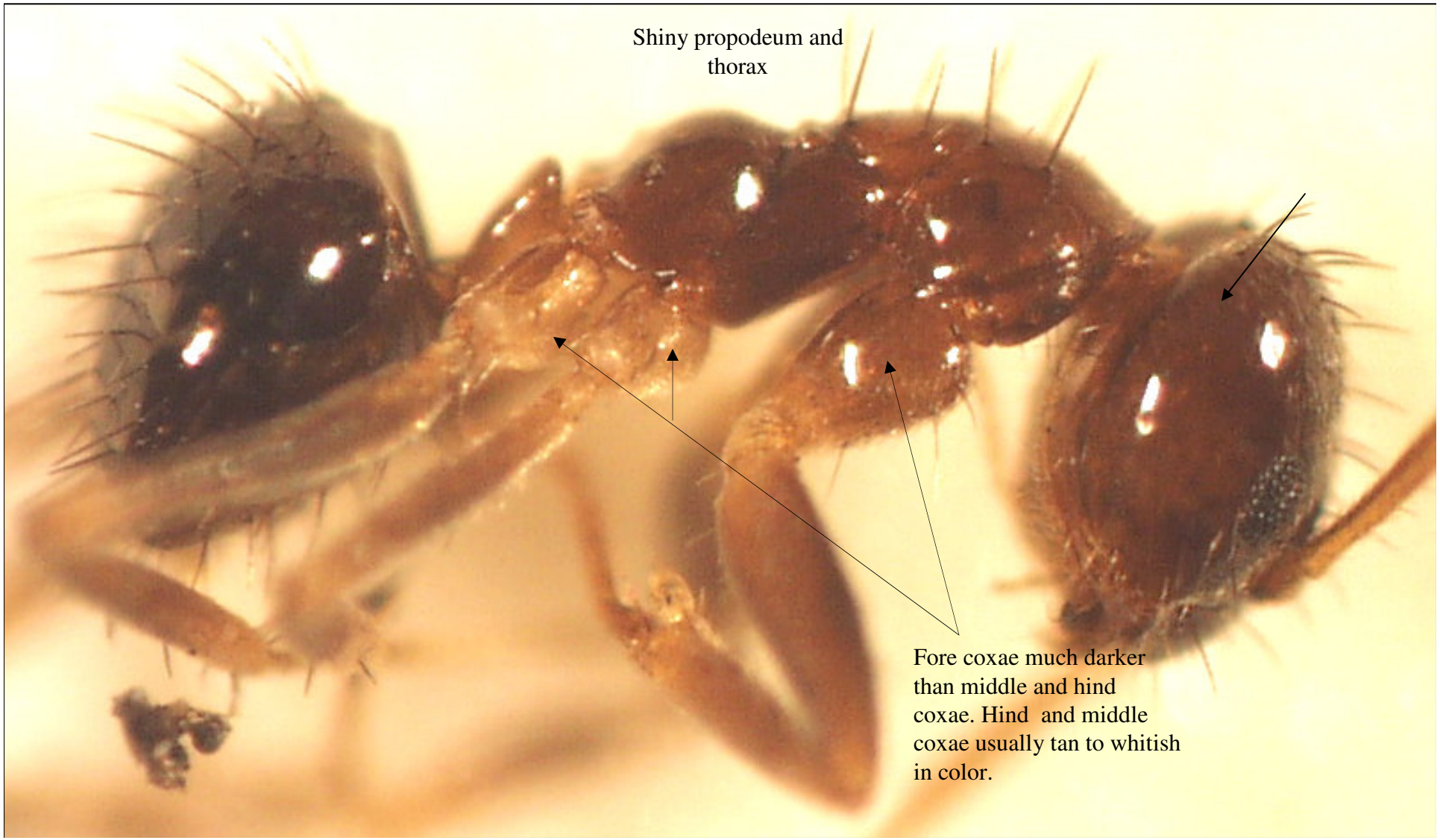
Description: Antenna with 12 segments. Paired macrochaetae on body and head. Bicolored. Scapes with at least 4 standing macrosetae. Gaster and thorax with greatly reduced pubescence. Middle and hind coxae and legs lighter than gaster and head. Head smooth and shining. Anterior ½ of head lacking pubescence. Distance between cephalic setae as wide or wider than their length. Eye ¼ head length.

References: Creighton (1950), Trager (1984)

Like faisonensis, but larger and in marshes.
No specimens collected.

Paratrechina faisonensis Forel

Description: Antenna with 12 segments. Paired macrochaetae on body and head. Small eyes. Dense pubescence on head. Erect macrochaetae on scape. Thorax and propodeum shiny. Brown. Tan to whitish middle and hind coxae contrast with fore coxae. Spaces between cephalic setae no wider than the length of the setae (usually less). This is a smaller ant than either *P. vividula* or *P. arenivaga.* It is much rarer than the other three species of *Raratrechina*. **References:** Creighton (1950), Trager (1984)



Paratrechina faisonensis (Continued)

Standing Macrochaete
on scape

Paratrechina parvula Mayr

Description: Antenna with 12 segments. Paired macrochaetae on body and head. Lacks setae on the antennal scape. Color brownish yellow. Palp formula 6, 4. Alitrunk exhibits a semi-hourglass shape from dorsal view head and body have coarse setae arranged in distinct pairs. Scapes with no standing macrochaetae. Uniformly dark brown, except for the legs.

References: Creighton (1950), Trager (1984)

Paratrechina parvula (Continued)

Paratrechina vividula Nylander

Description: Antenna with 12 segments. Paired macrochaetae on body and head. Bicolored. Scapes with at **least 4 standing macrosetae**. Gaster and thorax with greatly reduced pubescence. Middle and hind coxae and legs lighter than gaster and head. Head smooth and shining. Anterior ½ of head lacking pubescence. Distance between cephalic setae as wide or wider than their length. Eye ¼ head length. Slight **bicolor. References:** Creighton (1950), Trager (1984)

Paratrechina vividula (Continued)

Prenolepis imparis Say

Description: Antenna with 12 segments. Antennal sockets close to margin of clypeus. Palp formula 6,4. Lacks coarse setae in distinct pairs. Antennal scapes very long. Mesonotum is consticted, giving the alitrunk an hourglass shape when viewed from above. Color yellowish-brown. Called the honey ant, because it stores nectar and honeydew. More tolerant of cool temperatures than most other ants. Prefers damp soil and shade. **References:** Creighton (1950)

Prenolepis imparis (Continued)

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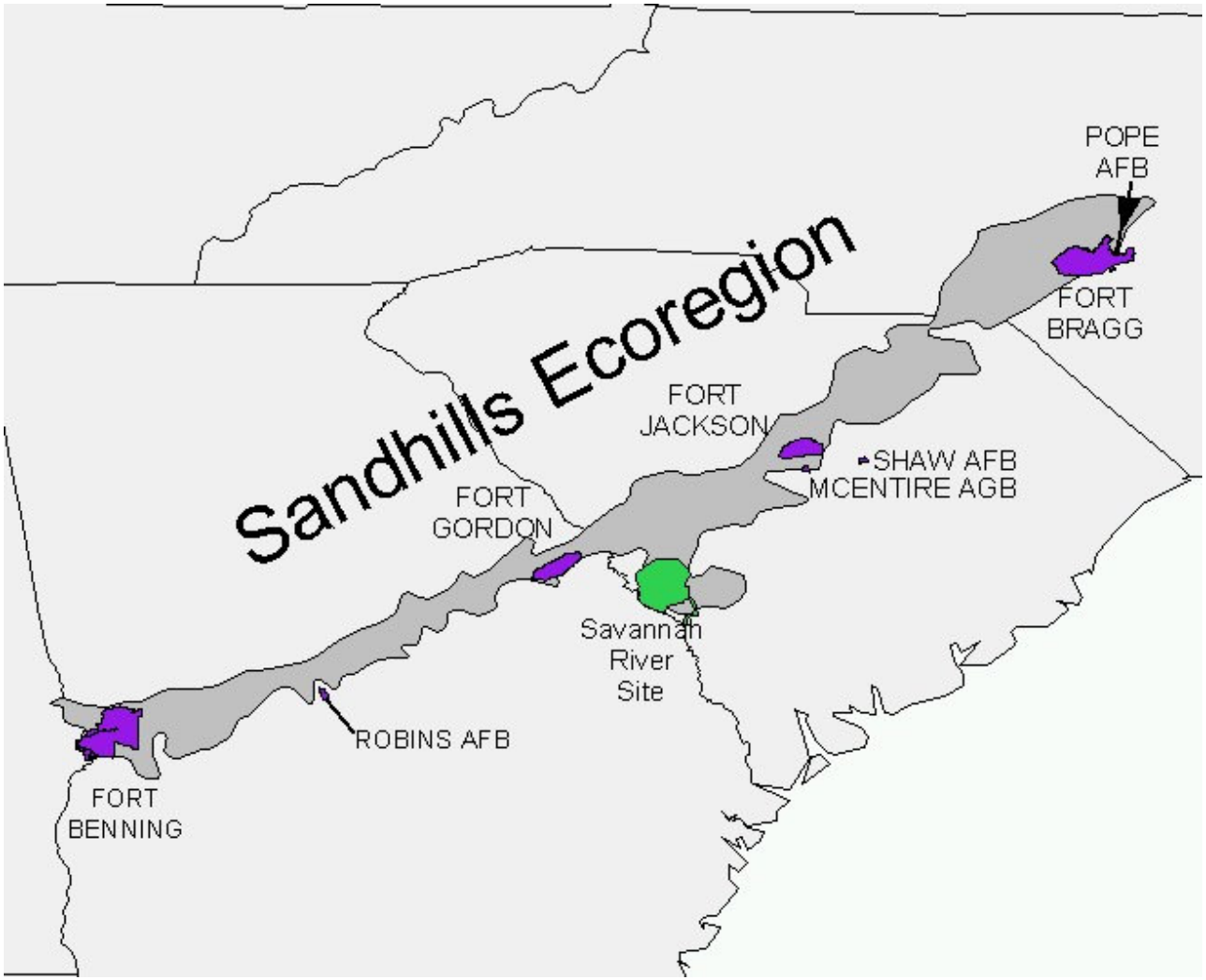
Taxonomic Resource

All species and genus names are from Bolton, B. 1995. A New General Catalogue of the Ants of the World. Harvard University Press, Cambridge, unless a more recent name exists.

Collecting Sites and Sampling Protocol

These are the ants of disturbed and undisturbed upland habitats at Fort Benning, Georgia. All sample sites were in the Fall-line Sandhills, between the Piedmont and the Atlantic Coastal Plain. We sampled the ant community (between 2000 and 2003) with pitfall traps, sweeps through vegetation, and by hand. Undisturbed habitats ranged from longleaf pine-turkey oak scrub, through pine-oak forest, to hardwood forest. Disturbed habitats were missing most of their overstory vegetation, and had compacted soils that were missing their A-horizon. A total of 40 sites were sampled for arthropods, vegetation, and soil characteristics.

Fort Benning and the Sandhills Ecoregion



Low Disturbance

No military training
Minimal foot traffic

Medium Disturbance

Past training activities
Current foot traffic

High Disturbance

Current mechanized-infantry training


Bradley Fighting
Vehicle

Pitfall Trap

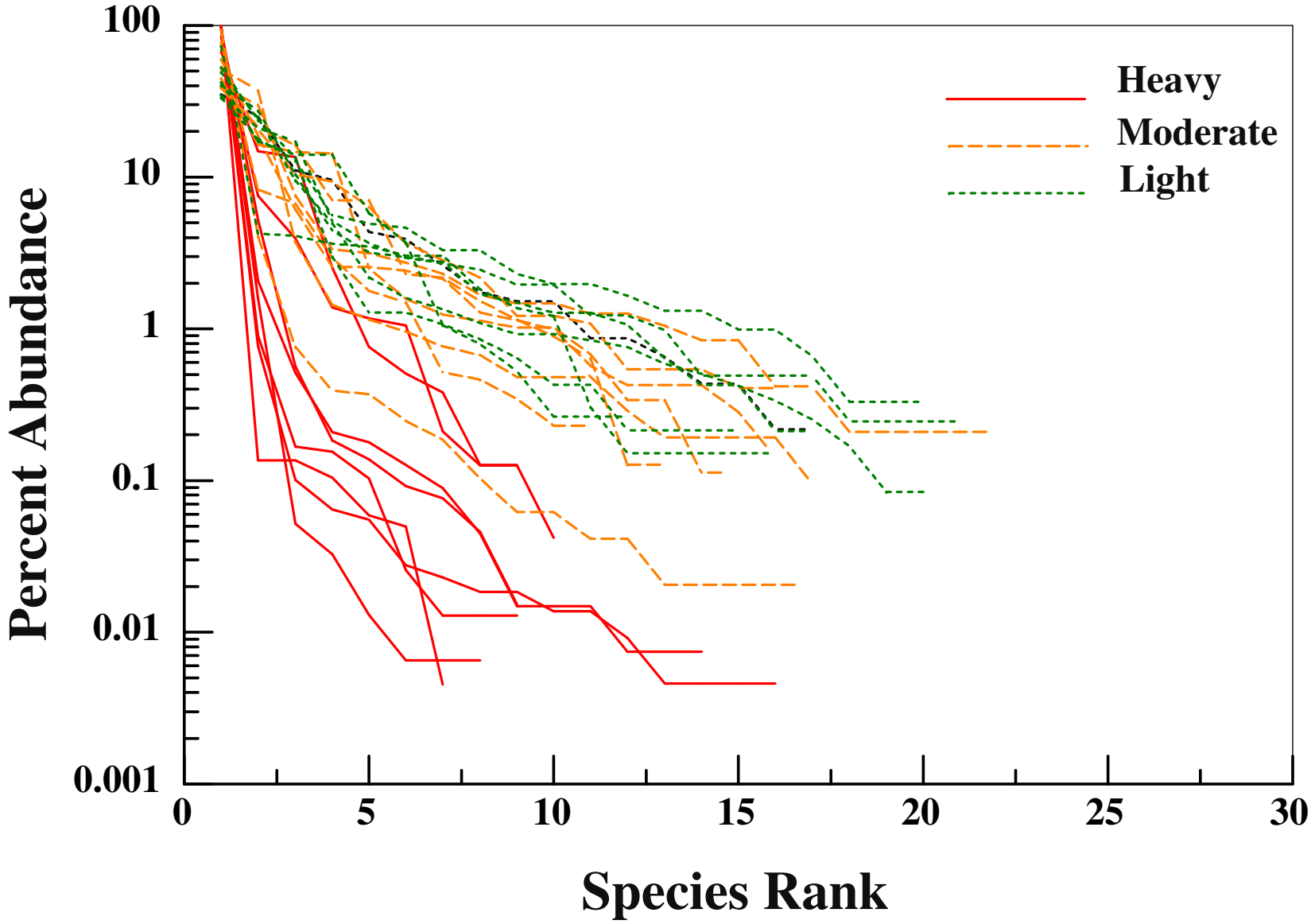
Sampling ants by hand

Sweep Net

Undisturbed longleaf and loblolly pine woodland. The dominant ants here are *Solenopsis invicata* and *Dorymyrmex bureni*. This is also a Red-cockaded Woodpecker nesting area. The marked tree in the background is a nest tree.

Highly disturbed landscape. The dominant ant here is *Dorymyrmex smithi*.
Note: This is a washout, not a road!

Species abundance curves for ants in pitfall traps (2000-2002)



Conclusions

- Highly disturbed sites had fewer trees, diminished ground cover, and more compacted soils with a shallower A-horizon
- Highly disturbed areas had fewer species, and greater numbers, of ants than did moderately or lightly disturbed areas
- The ant communities in disturbed areas were also less equitable, and were dominated by active Dolichoderinae, especially *Dorymyrmex smithi*
- Prescribed burning at several of our sites had no detectable influence on either the species diversity or abundance of ants

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Mark Deyrup, Josh King, Stefan Cover, William Mackay, James Trager and Joe MacGown offered invaluable taxonomic advice. Kerry Wrinn, Cathy Graham, Jeff Duda, and Tony Kryzsik helped with the field collections.


Courtesy of Michelle Brown