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ANTS OF THE GENUS *PONERA* IN AMERICA, NORTH OF MEXICO

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The species of *Ponera* numbering not more than from 75 to 100 occur throughout the tropical and temperate regions of the world. In America, north of Mexico only five species are known, regardless of the great amount of ant collecting that has been done. Practically all of these, with the exception of *Ponera coarctata* subsp. *pennsylvanica* Buckley are confined almost entirely to the southern half of the United States. Several of the species such as *inexorata* Wheeler and *ergatandria* Forel have been collected too infrequently for one to know very definitely the limits of their distribution.

With the exception of Wheeler's study of the habits of *Ponera coarctata* subsp. *pennsylvanica* (The Habits of *Ponera* and *Stigmatomma*. Biol. Bull. 2, pp. 44-56 (1900)) no detailed investigations have been conducted on the biology of our North American forms. It is generally known however that the ants form very small colonies of only a few dozen to a hundred or so individuals in the soil beneath objects or else in the rotting wood of stumps, logs, et cetera, as well as in the rich wood mold of forests. None of the ants have been observed to feed on honey-dew. Their preferred food is flesh. On account of their timid manner and subterranean habits the workers are not so commonly seen as are those of other ants.

The morphological characters of the workers and queens of our North American forms, while distinctive enough when one species is compared with another, are not so evident when one possesses only individuals of a single species. One who has not handled specimens of *Ponera* frequently is easily apt to become confused. The two species that are perhaps most likely to be mistaken for each other are *opaciceps* and *pennsylvanica*. In examining numerous specimens over a long period of years, the writer has been especially impressed with their variable color and sculpture, and likewise the difference in the length of their antennal scapes, and the shapes of their petioles. These facts in addition to the scarcity of literature for satisfactory identification of the ants has led the writer to prepare this paper. Herein a key is furnished for separating the workers of each species, descriptions are given of workers, queens and aberrants, the distribution of each species is listed and biological notes are furnished where it is thought they would be of interest. The males of the various species have not been described because it is believed that nothing short of a study of their genitalia would satisfactorily separate them.

Emery in the *Genera Insectorum*, Fascicule 118, pp. 88-89 (1911) characterizes the various castes and their aberrants as follows:

"*Worker*.—Head more or less elongate with the lateral borders faintly convex. Anterior border of clypeus more or less curved, or else prolonged as a large and rounded lobe. Frontal carinae short, the lobes covering the antennal insertions semi-circular. Mandibles triangular, large, the teeth small and scarcely protruding; maxillary palpi with two segments or a single segment. Antennae strongly thickened toward the end, the last segments much longer and larger, but not forming a clearly limited club, or else a club of five segments. Eyes small, sometimes atrophied or missing, placed well to the front. Thorax generally with the meso-epinotal suture distinct. Petiole surmounted with a thick scale or elevated node.

"*Female*.—Very similar to the worker, but larger, winged, with the eyes much more developed, also some ocelli; the scale of the petiole is higher and thinner than in the worker of the same species. There are occasionally some wingless intermediaries between the worker and female. With *P. eduardi* Forel, these examples have a certain constance; they have eyes larger than workers, but no ocelli; Mr. Forel considers them as workers and not as ergatogynes, he admits however, the dimorphism of the workers in this species.

"*Male*.—Winged form: scape generally shorter than the second segment of the funiculus, rarely a little longer. Thorax normal: mesonotum and metanotum differentiated as is the custom with winged ants; the mesonotum convex, dominating the pronotum. Petiole surmounted with a scale more or less thick. Pygidium generally terminating in a spine, rarely spineless.

"*Male*.—Ergatoid form (*P. ergatandria* Forel, *punctatissima* Roger, *ragusae* var. *santschii* Emery): Head almost like that of the worker. Mandibles developed as with the worker. Antennae of twelve or thirteen segments; scape a little more short than that of the worker; the funiculus is short and enlarges toward the extremity. Eyes small like those of the worker, sometimes missing. Thorax almost like that of the worker; the mesonotum of a single piece and the metanotum having disappeared from the dorsal surface of the thorax. Last segment of the gaster invaginated the one into the other.

"The male ergatoid of *P. eduardi* is exceptional in many regards; the head is similar to that of the winged male; the mandibles are very small, and without teeth; the scape is almost as short as with the winged male, but the funiculus is much more short; the segments of the gaster are not invaginated the one in the other. It is necessary to remark that the ergatoid male has only been found a single time with this latter species, the winged male being the normal male."

KEY FOR THE IDENTIFICATION OF THE WORKERS

1. External border of mandibles sinuate; base of epinotum laterally compressed; color ferruginous yellow..... *inexorata* Wheeler
- External borders of mandibles not sinuate..... 2
2. Petiole when viewed in lateral profile slender, subtriangular (that is, narrower dorsally than ventrally); body slender; color varying from light brown to pitch black..... *trigona* var. *opacior* Forel

- Petiole when viewed in lateral profile robust, subrectangular (that is, approximately as wide dorsally as ventrally)..... 3
3. Head very finely punctate, shining; eyes extremely small (3-4 facets); color light brownish yellow or dirty brownish yellow; size 2.3-2.9 mm. (Florida, Texas)..... *ergatandria* Forel
- Head with coarser punctures, therefore subopaque or opaque; eyes with more than 3-4 facets; color normally brownish black or black; robust; size exceeding 3 mm..... 4
4. Head with dense, coarse punctures, subopaque; more common to the northern section of North America, but occurring also over the eastern half of the United States..... *coarctata* subsp. *pennsylvanica* Buckley
- Head densely, but more finely punctate, thus giving the general surface a subopaque appearance but lacking the coarse granular effect common to the species *pennsylvanica*..... *opaciceps* Mayr

***Ponera inexorata* Wheeler**

Wheeler, *Psyche* 10: 94-95 (1903), *worker, female*. Fig. 1.

"*Worker*.—Length: 2.75-3.25 mm. Mandibles long and flattened, with concavely sinuate lateral borders and about a dozen teeth, which are small and indistinct toward the base, but longer and more pointed toward the tips of the blade. Head distinctly longer than broad with concave occipital margin and subparallel sides. Clypeus broadly rounded in front, convex in the middle. Antennae rather slender, scape reaching to the posterior angle of the head, joints 2-5 of the funiculus fully as long as broad, the remaining joints longer than broad. Eyes very small, with at most 3-4 ommatidia in their longest diameter and situated about one-fourth the distance from the anterior to the posterior border of the head. Thorax with very distinct pro-mesonotal and mesoepinotal sutures; pronotum broader than the succeeding thoracic segments, rounded, with rather sloping anterior angles; mesonotum convex; epinotum laterally compressed, its basal portion in profile horizontal and nearly straight, its declivity flattened, with rounded sides, not carinate. Petiole decidedly narrower than the first gastric segment, its anterior surface flattened dorsoventrally but distinctly convex from side to side; posterior surface flat in both directions, so that the segment when seen from above is somewhat semicircular; seen from behind the border of the node is nearly circular in outline. Gaster of the usual form. Legs moderately stout, each tibia with a pair of spurs, one of which is pectinated.

"Surface of the body, especially the dorsal surface of the head, thorax, and petiole, shining. Mandibles with coarse, scattered, piligerous punctures. Head covered rather densely but not confluent with coarse piligerous punctures or small foveolae. Pronotum with similar but smaller and sparser punctures; neck and mesonotum finely corrugated above; meso- and metapleura similarly but more coarsely sculptured, subopaque. Petiole and gaster covered with piligerous punctures like those on the pronotum.

"Whole body clothed with pale yellow, reclinate or appressed hairs, among which there are longer, more scattered, suberect hairs, especially on the thorax and abdomen.

"Yellowish ferruginous throughout, mandibles, antennae, and legs somewhat paler. Epinotum, mesopleurae, and posterior gastric seg-

ments sometimes more reddish or brownish. Teeth of mandibles and anterior border of clypeus blackish."

"*Female* (dealated.) Length: 3.25 mm. Very much like the worker in form and coloration. Each ocellus with a small black spot at its margin. Head distinctly more opaque than in the worker, owing to a denser aggregation of the piligerous foveolae; the node is thinner antero-posteriorly and its anterior surface is very flat or evenly slightly concave from side to side. Alar insertions black."

Type Localities: Austin, San Angelo and Fort Davis, Texas (Wheeler). *Other Localities:* *Mississippi*—State College (M. R. Smith), Ripley (S. W. Simmons); *South Carolina*—Walhalla (M. R. Smith).

This species ranges from Costa Rica through Mexico into the southern section of the United States. It is apparently rarer than some of the other members of the genus, hence the few times it has been collected. As yet its definite range in the United States is more or less problematical.

The worker is characterized by its light yellowish ferruginous color, the shining appearance of the head, thorax and petiole, the subparallel sides of the head, and the sinuate external borders of the mandibles.

Wheeler states that he found *inexorata* rather rare in Texas. According to him, "it occurs in colonies not exceeding a dozen individuals and usually much smaller. I have found it only on dry hill slopes under rather small stones (limestone in central Texas, volcanic rock in the Trans Pecos)."

***Ponera trigona* var. *opacior* Forel**

Forel, Trans. Ent. Soc. Lond., p. 363 (1893), *worker*.
Emery, Zool. Jahrb. Syst. 8: 268 (1895), *all castes*; Mem. Acad. Sc. Bologna (5), 5: 296 (1895), *male*.

Worker.—Length: 2–2.3 mm. Head, excluding the mandibles, longer than broad, posterior border faintly emarginate, posterior angles rounded, sides convex. Eyes small, rounded, apparently composed of about 6 facets, placed about the anterior fourth of the sides of the head. Mandibles rather irregularly toothed. Scapes somewhat robust, not attaining the posterior border of the head; funicular segments 3–6 much broader than long, the terminal segment scarcely as long as the three preceding segments taken together. Thorax short, fairly robust, with distinct pro-mesonotal and meso-epinotal sutures; viewed in lateral profile the base of the epinotum appears to be of the same length as the declivity and meets the latter in a very distinct obtuse angle, the declivity faintly concave. Petiole when viewed in lateral profile not as robust as in the other species, very distinctly narrower (antero-posteriorly) dorsally than ventrally, strongly convex anteriorly, faintly convex posteriorly; viewed posteriorly the rounded superior border meets the lateral borders in such a way as to give an almost circular effect.

Body, due to the faint sculpturing and the nature of the pubescence rather glabrous, in some lights however somewhat subopaque. Head covered with extremely fine, dense punctures; thorax much less so;

pleurae of the meso- and metathorax, especially the lower parts, finely and longitudinally striated.

Pubescence extremely fine on all parts of the body but probably most apparent on the gaster and head, pubescence scarcely hiding the general surface of the body, but in some lights giving it a pruinose effect. Pilosity poorly developed; hairs grayish, most noticeable on the dorsal surfaces of the head and gaster, on the former strikingly long, on the latter short, except toward the apex of the gaster.

Color variable; ranging from light brown to practically black, appendages lighter.

Queen.—Length: 2.75–3 mm. Very similar to the worker but larger and more robust. As with the worker funicular segments 3–6 are much broader than long, and the terminal segment shorter than the preceding segments taken together. The most distinctive character is the shape of the petiole which is very narrow antero-posteriorly and clearly thinner above than at the base. The wing veins and stigma very light brown.

Type Locality: Island of St. Vincent, Lesser Antilles (Forel).

Other Localities: *Alabama*—Naftel, Elmore, Ashford (L. C. Murphree); *Arkansas*—ElDorado, Camden, Hot Springs (D. E. Read); *California*—Palo Alto (H. Heath); *Colorado*—Canyon City (P. J. Schmitt); *Florida*—Jacksonville (Mrs. A. T. Slosson); *Georgia*—Gainesville, Okefenokee (J. C. Bradley), Vidalia, Mt. Vernon, Glenwood, Shady Dale (H. T. Vanderford); *Illinois*—Edwards County (A. Forbes), Urbana (H. H. Ross); *Kansas*—Locality? (W. P. Hayes); *Kentucky*—Ashland, Owensboro, Uniontown (H. T. Vanderford); *Louisiana*—Tallulah (P. A. Glick); *Mississippi*—Landon, Belzoni, Bond, Cedar Bluff, Columbus, Duck Hill, Fayette, Kilmichael, Quincy, Quitman, Shaw (L. C. Murphree and M. R. Smith), Lucedale (H. Dietrich), Tupelo (W. C. McDuffie), Ripley (S. W. Simmons), Aberdeen, State College, Boyle, Louisville, Adaton (M. R. Smith), Shaw (G. W. Haug); *Missouri*—Poplar Bluff (D. E. Read); *New Mexico*—Las Vegas (T. D. A. Cockerell); *North Carolina*—Bessemer City, Hot Springs (H. T. Vanderford); *Ohio*—Lower Salem (M. Schramm); *Oklahoma*—Wichita National Forest, Beckham and Comanche counties (W. Fisher); *Oregon*—Boundary line between Oregon and California (A. C. Cole); *South Carolina*—Walhalla (M. R. Smith), Calhoun, Prosperity, Westminster, Scranton, Charleston (D. E. Read); *Tennessee*—Montvale Springs (C. H. Kennedy), Knoxville (C. N. Ainslie), Sewanee, Morrison, Adamsville, Saltillo, Randolph (L. C. Murphree); *Texas*—Austin, McNeill, Marfa (Wheeler), Plano (E. S. Tucker), Paris (A. Rucker), Marshall, Commerce, Bryan (D. E. Read), Brownsville (T. F. McGehee).

This species is apparently distributed from Chile, South America, into the southern half of the United States and out into the islands of the West Indies. In Mississippi, it is our most common species of *Ponera*, ranging throughout the entire state, whereas *pennsylvanica* is confined more to the northern section of the state, and *opaciceps* to the southern.

P. trigona opacior is highly variable in color, sculpture and even in the shape of the petiole. From other species the worker can be distinguished by its slender, graceful appearance, finely punctate body, and distinctly triangular shaped petiole (viewed in lateral profile).

P. opacior has the same general feeding and nesting habits as other species of *Ponera*. Our records in Mississippi seem to indicate that the males and queens are produced from the middle of May to as late as the middle of August.

Ponera ergatandria Forel

Forel, Trans. Ent. Soc. London, pp. 365, 367 (1893), *worker, female, male*.

Emery, Bull. Soc. Ent. Ital. 28: 22 (1896), *female*.

Wheeler, Bull. Amer. Mus. Nat. Hist. 24: 405-406 (1908), *worker, female, male* (after Forel).

"*Worker*.—Length: 2.3-2.9 mm. Narrow and much elongated. Mandibles relatively short with 4 teeth in front and distinctly denticulated behind. Clypeus short, rather strongly two-notched in front. Frontal furrow longer than half the distance from the frontal carinae to the occiput. Eyes vestigial, of two or three facets, situated a little in front of the anterior fifth of the sides of the head. The scapes do not reach the posterior sixth of the head. The pronotum is longer than broad, much longer and narrower than in *P. foeda*, *trigona*, and *opaciceps*, not enlarged at its anterior corners, which are absolutely effaced. Epinotum as in *P. contracta*, but the basal surface is a little longer than the declivity, and the latter is not even marginate, but rounded on all sides. Petiole much narrower, lower and a little thicker than in *P. contracta*, otherwise of the same form. It is at least twice as broad as thick, of the same height as the first gastric segment. Gaster very long and narrow, hardly constricted behind the first segment, which is narrower, lower and less truncated in front than *P. foeda*, *contracta*, and *punctatissima*. Legs much shorter than in any of these species.

"Shining, finely punctate, like *P. contracta*, but the punctation of the head is finer.

"Pilosity and pubescence longer and paler, very apparent.

"Body sordid brownish yellow, with the lower portion of the head, certain portions of the thorax, and the middle of the gastric segments deep brown. Legs, antennae, mandibles and tip of abdomen more or less pale, sordid yellowish or brownish."

"*Female*.—Length: 2.7-2.9 mm. Shorter and broader than the worker, otherwise presenting the same characters, but more deeply and strongly sculptured. Wings subhyaline; veins and stigma very distinct. Much smaller than the females of the European species."

"*Male*. Length: 3 mm. Apterous, ergatoid; much elongated and very narrow. In other respects extremely close to the dimorphic male of *P. punctatissima* (*P. androgyna* Roger), but still more closely resem-

bling the worker from which it differs only in the following characters: It is blind with a small pigment spot in place of the eyes. Head elongated, rectangular, $\frac{1}{4}$ longer than broad. The scapulae hardly reach to the posterior fourth of the head and are subclavate. Funicular joints broader and more widely separated from one another. The teeth of the mandibles are somewhat more obtuse. The clypeus is a little longer and less vaulted. The gaster has one more segment and the male genital organs are altogether normal; the scales are large, the external genital valvules short, triangular. The pygidium has no spine and the hypopygium is rounded. Pale sordid yellow; antennae and anterior portion of the head and middle of the gaster somewhat more brownish. The antennae, moreover, are 12-jointed and the narrow thorax is in all respects like that of the worker."

Type Locality: Island of St. Vincent, Lesser Antilles (Forel).
Other Localities: Texas—New Braunfels (Wheeler); Florida—Belle Glade, Daytona Beach (D. E. Read).

This species has been collected in Costa Rica and in a number of the islands of the West Indies, as well as in the states of Texas and Florida. *P. ergatandria* is either extremely rare or absent from the other southern states, especially those of the Gulf Coast region.

This is the smallest of our North American *Ponera*. Workers of *ergatandria* can be recognized by their extremely small eyes (2–3 facets), short antennal scapes, and sordid brownish yellow color.

The writer has little information on the biology of this ant. As mentioned above the male is represented by an aberrant form which possesses a combination of both male and worker characters. During the middle of July, 1932, the writer received numerous winged females from Belle Glade, Florida, with the report that the ants were so numerous in the field as to annoy the negro laborers like mosquitoes. At night, it was stated, the ants experienced little trouble in passing through window screens.

Ponera coarctata subsp. *pennsylvanica* Buckley

Buckley, Proc. Ent. Soc. Phila. 6: 171 (1866), *worker*. *Ponera pennsylvanica*.
Emery, Zool. Jahrb. Syst. 8: 267 (1895), *all castes*.
Wheeler, Biol. Bull. 2: 44, Figs. 1–4 (1900), *all castes*.

Worker.—Length: 3–3.75 mm. Head, excluding the mandibles, very much longer than broad, sides moderately convex, posterior border faintly but definitely excised in the middle. Eyes very small, not convex, composed of approximately 6 ommatidia, placed toward the front of the head about one-fourth the distance from the base of the mandibles. Ocelli absent. Clypeus convex medianally. No distinct frontal area. Frontal furrow extending approximately half the distance from the frontal carinae to the posterior border of the head. Mandibles with two or three prominent teeth anteriorly, and many small denticulae posteriorly. Scape robust, not attaining the posterior border of the head; funiculus clavate, the terminal segment almost, or about as long as the three preceding segments together. Thorax laterally compressed, moderately convex dorsally, wider anteriorly than posteriorly; pro-meso-

notal and meso-epinotal sutures distinct. Epinotal declivity faintly concave with weakly marginate sides, meeting the base in a well rounded obtuse angle. Petiole thick antero-posteriorly, scarcely narrowed dorsally, convex anteriorly, concave posteriorly, beneath with a prominent rectangular tooth, the front of which bears a spiracular opening, the posterior of which terminates in a rather sharp tooth. Tibiae of legs each with a well developed pectinated spur.

Mandibles smooth and shining, with sparse, scattered punctures. Head and thorax subopaque, covered with dense and coarse, but not confluent, punctures; petiole and gaster more shining, finely and densely punctate or shagreened.

Entire body covered with rather dense, yellowish gray, appressed pubescence. Erect hairs on the head, thorax, petiole and gaster; most numerous on the latter. Hairs longest on the anterior and posterior ends of the body.

Typical specimens black; mandibles, clypeus, frontal carinae, antennae, legs, and tip of gaster reddish or yellowish. Occasionally individuals are reddish brown with varying amounts of infuscation.

Queen. Length: 4 mm. Resembling the worker in general appearance but larger and more robust. Head with large compound eyes which are placed slightly less than their greatest diameter from the base of the mandibles. Vertex with three ocelli in the form of a triangle. Petiole smaller, and more slender (antero-posteriorly) than with the worker. Wings hyaline, ciliated, with yellowish veins and darker stigma; with one submarginal and a discoidal cell.

Type Locality: Near Philadelphia, Pennsylvania (Buckley).
Other Localities: *Connecticut*—Colebrook (Wheeler); *Florida*—Monticello, Gainesville (Wheeler); *Georgia*—Spring Creek, Thalmann, Burton, Atlanta (J. C. Bradley); *Illinois*—Danville (J. Alsterlund), Urbana (M. R. Smith), Normal, Centralia, Bloomington, Algonquin (Ill. Nat. Hist. Survey), Charleston, Savoy (C. O. Mohr), Galena, Herod, Harrisburg, Putnam, Lagrange (H. H. Ross), Herod, Zeigler, Makanda (T. H. Frison); *Indiana*—Grand Chain, Wyandotte (W. S. Blatchley); *Iowa*—Stanhope (G. O. Hendrickson); *Kansas*—Riley County (W. P. Hayes); *Kentucky*—Ashland, Vanceburg (H. T. Vanderford); *Louisiana*—Tallulah (P. A. Glick); *Maine*—Casco Bay (Wheeler), Sebago Lake (collector?); *Massachusetts*—Woods Hole, Brewster, East Falmouth (A. H. Sturtevant); *Michigan*—Charity Island (F. M. Gaige); *Mississippi*—State College, Corinth (M. R. Smith), Lucedale (H. Dietrich); *Missouri*—Columbia (M. Talbot); *Nebraska*—Lincoln, Warsaw (O. S. Bare); *New Hampshire*—Contoocook (E. and G. C. Wheeler); *New Jersey*—Camden (Fox), Lakehurst, Halifax (Wheeler); *New York*—Staten Island (W. T. Davis), Syracuse, Jamestown (E. and G. C. Wheeler), Ithaca (J. C. Bradley); *North Carolina*—Black

Mountain (Wheeler); *Ohio*—Columbus (M. R. Smith), Put-in-Bay (M. Talbot); *South Carolina*—Clemson College (M. R. Smith); *South Dakota*—Canton (H. C. Severin); *Tennessee*—Knoxville (C. A. Dennis), Great Smoky Mountains (C. H. Seevers), Parsons, Middleton (L. C. Murphree); *Virginia*—Lexington (H. T. Vanderford); *Maryland*—Locality? (Emery); *West Virginia*—Morgantown (G. C. Wheeler); *Wisconsin*—Madison (M. R. Smith).

P. coarctata pennsylvanica is apparently rather generally distributed over that section of the United States east of the 97th degree of longitude. Although rather common in the northern and eastern portions of this section, in others it is either sporadically distributed or absent from some places. In Mississippi for instance the species is apparently absent from the lower third of the state, is very rare in the central third and is only moderately common in the northern third. As mentioned elsewhere in this article, the ant ranges even into the eastern half of Canada.

The workers do not resemble those of any other species of *Ponera* except *opaciceps*. The elongated head, coarsely punctured head and thorax, subopaque appearance, and rectangular shaped petiole (viewed in lateral profile) will serve to distinguish the worker of this species from the other *Ponera*.

The biology of this species has been rather adequately covered by Wheeler. The reader is therefore referred to this interesting paper.

Ponera opaciceps Mayr

Mayr, Verh. Zool.-bot. Ges. Wien, 37: 536 (1887), *worker, female*.

Smith, M. R., Annals Ent. Soc. Amer. 22: 545 (1929), *male*.

Smith, M. R., Annals Ent. Soc. Amer. 24: 507-509 (1931), *ergataner*; Fig. 1, *worker*; Figs. 2, 3, *ergataner*.

Worker. Length: 3.2-3.4 mm. Head, excluding mandibles, longer than broad, posterior border faintly emarginate, the sides convex, and the posterior angles rounded. Eyes small, with approximately 10-12 facets, situated at a distance less than twice their greatest diameter from the base of the mandibles. Mandibles with more irregular teeth than with *P. pennsylvanica*, the front teeth not only larger but more regular. Clypeus convex medianly. No frontal area. A faint frontal furrow extends half the distance or beyond from the frontal carinae to the posterior border of the head. Scape not attaining the posterior border of the head; the funiculus clavate, the last segment apparently shorter than the three preceding segments. Thorax with distinct promesonotal and meso-epinotal sutures, not so laterally compressed, especially about the epinotum as with *P. pennsylvanica*; epinotal declivity faintly concave, with bluntly marginate sides, meeting the base in a well rounded, obtuse angle. Petiole viewed in lateral profile thick antero-posteriorly, scarcely narrower dorsally, convex anteriorly, concave posteriorly; viewed posteriorly the superior border merges into the sides in well rounded angles; tooth below although rectangular, apparently

lacking the spiracular opening in front, and the point posteriorly, as with *P. pennsylvanica*.

Head, thorax, petiole, and gaster very densely and finely punctate, subopaque; meso- and meta-pleurae finely and longitudinally striated; mandibles, and epinotal declivity rather smooth and shining.

Pubescence yellowish gray, dense and appressed, covering all parts of the body. Hairs grayish, very noticeable on the clypeus and gaster where they are longest and most abundant; usually found sparingly on other parts of the body.

Color varying from brown to black; mandibles, antennal funiculi, legs and tip of gaster lighter.

Queen.—Length: 3.7–4 mm. So similar to the worker as to hardly warrant a brief description. Very slightly larger. Compound eyes placed at a distance from the mandibles less than their greatest diameter. Frontal furrow extending to the anterior ocellus. Petiole proportionally smaller and narrower anteroposteriorly on the dorsal border than with the worker. Wings very hyaline, with light yellowish veins and stigma, each with a submarginal and discoidal cell.

Ergataner.—Length of head .68–.76 mm.; length of thorax .935–.965 mm. Head, including mandibles, longer than broad; posterior border almost straight, and sides subparallel, thus giving the head a more rectangular appearance than with the worker. Mandibles moderately broad, triangular, edentate stubs. Clypeus strongly convex, protuberant. Antennae 13-segmented, gradually but not strongly enlarging distally; scapes short, subcylindrical, approximately equal in length to the second, third, and fourth segments of the funiculi taken together. Compound eyes small, almost circular, separated from the base of the mandibles by a space equivalent to approximately one and one-half times their greatest diameter. Thorax short, robust; viewed laterally the pro-mesonotal and meso-epinotal sutures are very distinct, especially on the dorsum; mesonotum strongly gibbous, clearly projecting above the general surfaces of the pronotum and epinotum. Between the mesonotum and epinotum the suture is represented by a very strong constriction, following which, the epinotum forms a rather long and gentle arch terminating at the petiole. The basal surface and declivity of the epinotum merge into each other so gradually that they are hardly distinguishable. Petiole large, robust, anterior and posterior faces convex, superior border rounded. Gaster similar to that of the worker, but bearing prominent genital appendages.

Color sordid yellow; margins of compound eyes and antennal cavities black, articulations of legs and sutures of thorax brown.

The above description is based on two specimens which were taken from a colony of *Ponera opaciceps* at Landon, Mississippi, by G. W. Haug on August 25, 1930. No other ergataners of this species have been seen or recorded.

Type Locality: Province of Saint Catherine, Brazil (Mayr).
Other Localities: *Alabama*—Montgomery, Inverness, Seale, Brantley, Loxley, Castleberry, Fowl River, Sellers (L. C. Murphree); *Arizona*—Lower Portions of Grand Canyon

(Wheeler); *Colorado*—Boulder (T. D. A. Cockerell); *Florida*—Royal Palm Park, Dunedin (W. S. Blatchley); *Georgia*—Sylvester, Glenwood, Preston, Nashville, Screven, Rockingham, Yatesville, Jesup (H. T. Vanderford); *Louisiana*—Waterproof, Cottonport, Torras, Schwab, Bunkie (T. F. McGehee); *Mississippi*—Landon, Bond, Columbus, Fayette, Quitman, Wiggins (L. C. Murphree and M. R. Smith), Prentiss (L. J. Goodgame), Ocean Springs, Perkinson (J. P. Kislanko), Fearn Springs (M. R. Smith), Lucedale (H. Dietrich), Carriere (L. E. Myers); *South Carolina*—Jacksonboro (D. E. Read); *Texas*—New Braunfels, Austin (Wheeler), Cleveland (L. C. Murphree), San Antonio (D. E. Read), Nederland, Port Neches, Matagorda (T. F. McGehee).

This species ranges from as far north as Boulder, Colorado, in the United States to as far south as Uruguay, South America, and throughout the islands of the West Indies. In Mississippi *opaciceps* is the most common species of *Ponera* in the southern section of the state but ranges as far north as Columbus.

The worker can be distinguished by the following characters: its larger size, proportionally broader and more finely punctate head than with *pennsylvanica*, and somewhat rectangular shaped petiole (when viewed laterally).

The biology of this ant is similar to that of the other species of the genus.