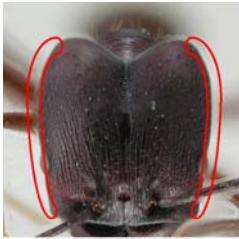


# Important Characters for Sorting and Identifying Indo-Malayan *Pheidole* Species

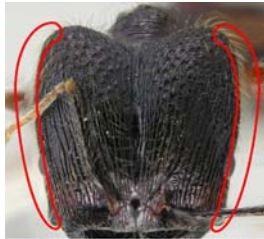
*Katsuyuki EGUCHI*  
*The Kagoshima University Museum,*  
*Kagoshima University, JAPAN*

## I. Major worker

### - Lateral face of head in full-face view



at most with appressed very short hairs

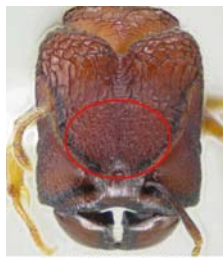


with relatively long decumbent to erect hairs

### - Sculpture on frons



longitudinally rugose



reticulate, with enclosures usually punctured

### - Vertex in profile

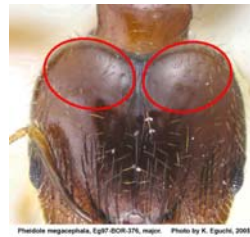


without a conspicuous impression

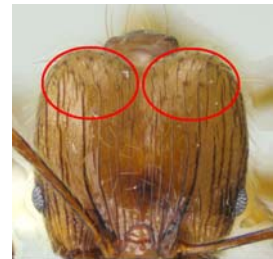


with a conspicuous impression

### - Sculpture on dorsal face of vertexal lobe



smooth



longitudinally rugose



obliquely to transversely rugose

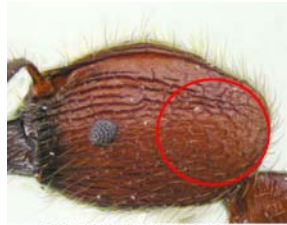


reticulate or rugoso-reticulate

- Sculpture on lateral face of vertexal lobe



*Phaeolepis megalocephala*, Eg97-BOR-276, major. Photo by K. Eguchi, 2005.  
smooth, shagreen or weakly rugoso-punctate



*Phaeolepis normata*, Eg98-BOR-482, major. Photo by K. Eguchi, 2005.  
well rugoso-reticulate

- Median process of hypostoma



*Phaeolepis longipes*, Eg98-BOR-473, major. Photo by K. Eguchi, 2005.  
absent or inconspicuous



*Phaeolepis longipes*, Eg98-BOR-473, major. Photo by K. Eguchi, 2005.  
developed

- Submedian processes of hypostoma



*Phaeolepis longipes*, Eg98-BOR-473, major. Photo by K. Eguchi, 2005.  
absent or inconspicuous



*Phaeolepis longipes*, Eg98-BOR-473, major. Photo by K. Eguchi, 2005.  
developed

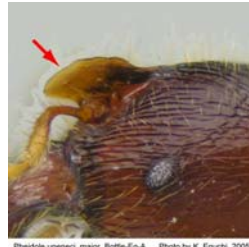
- Frontal lobe



*Phaeolepis butleri*, Eg96-BOR-124, major. Photo by K. Eguchi, 2005.  
small to moderate, horizontal to suberect

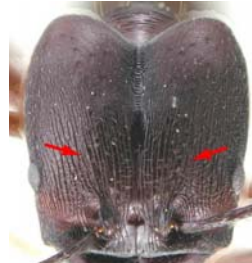


*Phaeolepis lawsoniana*, G-3-3, major. Photo by K. Eguchi, 2005.  
relatively developed, suberect to erect

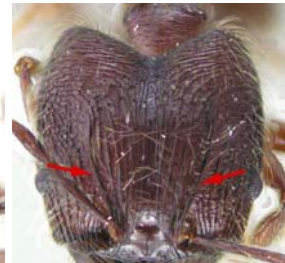


*Phaeolepis upemeci*, major, Bottle-Eg-A. Photo by K. Eguchi, 2005.  
extremely developed, extending beyond anterior margin of clypeus

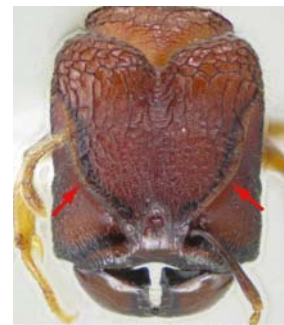
- Frontal carina



*Phaeolepis longipes*, Eg98-BOR-473, major. Photo by K. Eguchi, 2005.  
absent or inconspicuous



*Phaeolepis plagiata*, Eg96-BOR-351, major. Photo by K. Eguchi, 2005.  
conspicuous



*Phaeolepis amabilis*, Eg96-BOR-273, major. Photo by K. Eguchi, 2005.  
horizontally expanding, partly overhanging antennal scrobe

- Median longitudinal carina on clypeus



absent or inconspicuous



conspicuous



having at least 6 ommatidia on the longest axis

- Lateral part of clypeus



without any process



with a conspicuous process

- Sculpture of outer surface of mandible (excluding basal area)



largely smooth or shagreen



rugose from the base toward the masticatory margin

- Antennal club



3-segmented



4-segmented

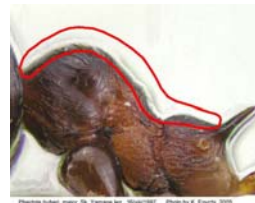


5-segmented



inconspicuous

- Standing hairs on mesosoma



absent

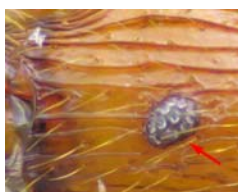


some to many

- Compound eye



consisting of only 5-7 ommatidia in total



having 4-5 ommatidia on the longest axis

- Posterior declivity of promesonotal dome in profile

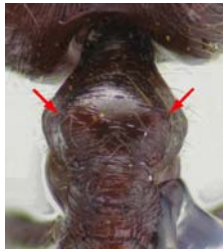


without a conspicuous prominence

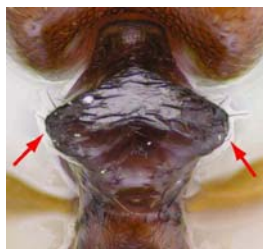


with a conspicuous prominence

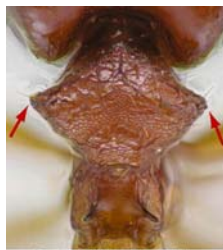
- Humeral area



*Pheidole pugnax*, Eg97-BOR-468, major. Photo by K. Eguchi, 2005.  
not or very weakly produced



*Pheidole formicosa*, Eg98-BOR-045, major. Photo by K. Eguchi, 2005.  
weakly to strongly produced with a round apex



*Pheidole arachnoides*, Eg98-BOR-024, major. Photo by K. Eguchi, 2005.  
weakly to strongly produced with an angulate apex



*Pheidole quadriceps*, Eg98-BOR-319, major. Photo by K. Eguchi, 2005.  
with a long and sharp spine

Propodeal spine



*Pheidole pugnax*, Eg97-BOR-468, major. Photo by K. Eguchi, 2005.  
triangular to elongate-triangular, with a broad base



*Pheidole formicosa*, Eg98-BOR-045, major. Photo by K. Eguchi, 2005.  
elongate-triangular to spinate, with a narrow base



*Pheidole arachnoides*, Eg98-BOR-024, major. Photo by K. Eguchi, 2005.  
spinate, extremely long



*Pheidole quadriceps*, Eg98-BOR-319, major. Photo by K. Eguchi, 2005.  
digitiform or spatulate, or at least with blunt or truncate apex

- Ventral surface of mid coxa and hind coxa



*Pheidole pugnax*, Eg98-BOR-021, major. Photo by K. Eguchi, 2005.  
smooth



*Pheidole arachnoides*, Eg98-BOR-187, major. Photo by K. Eguchi, 2005.  
sculptured

- Petiole in profile



*Pheidole formicosa*, major. Eg98-BOR-045. Photo by K. Eguchi, 2005.  
longer than postpetiole (excluding helcium)



*Pheidole sp. eg.100*, major. G. Friedlaender sp. 13102001. Photo by K. Eguchi, 2005.  
almost as long as postpetiole (excluding helcium)

- Subpetiolar process



*Pheidole megacephala*, Eg97-BOR-376, major. Photo by K. Eguchi, 2005.  
absent



*Pheidole quadricuspis*, Eg98-BOR-319, major. Photo by K. Eguchi, 2005.  
carinate



*Pheidole sp. eg.100*, major. G. Friedlaender sp. 13102001. Photo by K. Eguchi, 2005.  
lobate

- Sculpture of first gastral tergite



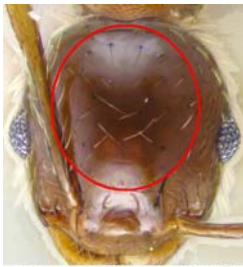
smooth



shagreen, or weakly punctured or rugoso-punctate

**2. Minor worker**

- Sculpture on frons and vertex



smooth



smooth with several evanescent or very weak rugulae



punctured, often overlain by rugulae



rugose or reticulate

- Posterior part of head in full-face view



with a straight or slightly concave posterior margin



roundly convex



prolonged and forming a neck

- Dorsal part of preoccipital carina



absent or evanescent



conspicuous

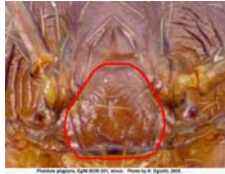


well developed as a flange

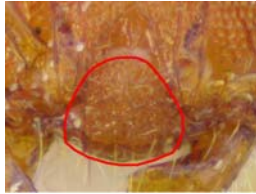
- Surface of median part of clypeus



smooth



smooth, overlain by several rugulae

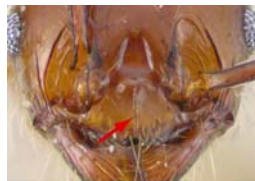


shagreen or weakly punctured, often overlain by several rugulae

- Median longitudinal carina on clypeus



absent or inconspicuous



conspicuous

- Compound eye



consisting of only 5-7 ommatidia in total

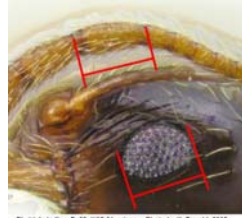


having 4-5 ommatidia on the longest axis



having at least 6 ommatidia on the longest axis

- Maximal diameter of compound eye



as long as or longer than the length of antennal segment X

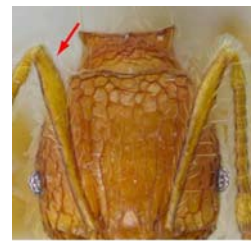


shorter than the length of antennal segment X

- Scape when laid backward



exceeding posterior margin of head by less than half length of second antennal segment, or not reaching the posterior margin



a little extending beyond the posterior margin of head (more than the length of second antennal segment)



well extending beyond the posterior margin of head (more than the 1/4 length of scape)

- Antennal club



3-segmented



4-segmented

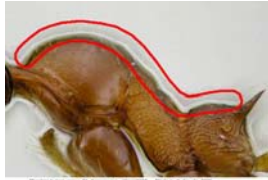


5-segmented



inconspicuous

- Standing hairs on mesosoma



absent

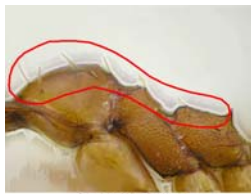


some to many

- Apex of standing hairs on mesosoma



tapering



blunt or truncate

- Sculpture on dorsum of promesonotal dome



smooth



rugose



reticulate



punctured

- Sculpture on lateral face of promesonotal dome



smooth



rugose



reticulate



punctured

- Posterior declivity of promesonotal dome in profile



without a conspicuous prominence

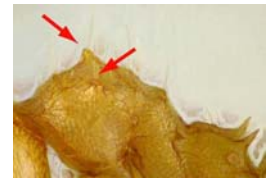


with a conspicuous prominence

- Humeral area



without any process



with a small process



with a well developed spine of which apex is blunt or truncate



with a well developed spine of which apex is very sharp

- Dorsal part of metanotal groove in profile



shallow or inconspicuous



deep

- Color of legs



not dichromatic



dichromatic, ivory-white from apical part of femur to apex of tarsus

- Propodeal spine



just present as a small dent

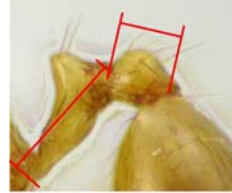


elongate-triangular to spinate, short to moderate in length

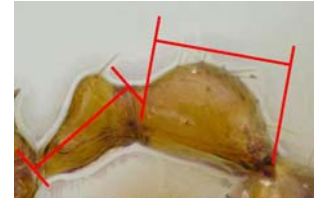


spinate, extremely long

- Petiole in profile



longer than postpetiole (excluding helcium)



almost as long as postpetiole (excluding helcium)

- Petiolar node



low to relatively developed



extremely developed

- Anteroventral part of postpetiole in profile



not or poorly prominent



well prominent