Pheidole punctatissima is a slightly more arboreal version of *P. bilimeki*. It favors the same kind of open, disturbed habitats and has a similar geographic range, from Colombia to Tamaulipas, Mexico. In contrast to *P. bilimeki*, it is rarely if ever found nesting beneath stones. It is nearly always in dead wood on the ground or dead branches in the low arboreal zone. Like *P. bilimeki*, it can be a pest ant in houses. The fact that *P. punctatissima* has longer scapes and more arboreal habits than *P. bilimeki* reinforces a general pattern in ants, in which arboreal species tend to have longer scapes than ground-dwelling congeners.

These species have a history of being transported by human commerce, which is unsurprising given their abundance and, in the case of *P. bilimeki* and *P. punctatissima*, their association with disturbed areas. Both *P. anastasii* and *P. bilimeki* have been collected in greenhouses in temperate zone cities (e.g., *cellarum* Forel 1908 [= *bilimeki*]), and all three have the potential to be frequently encountered as exotics. The occurrence of *P. bilimeki* and *P. punctatissima* as building pests can also lead to spurious locality records. For example, an intensive survey of the ant fauna of the Volcan Barva transect in Costa Rica (Project ALAS), a forested elevational gradient from sea level to 2600m, yielded the rare occurrence of *P. bilimeki* from primary forest throughout the transect. However, the samples were all processed in the ALAS lab at La Selva Biological Station, where *P. bilimeki* was a pest ant in the building. The Barva Transect records were almost certainly laboratory contaminants.

The following key will separate minor workers of the four species considered in this paper.

1 Scape relatively short (SI 95–108, lower cloud of points in Fig. 1); posterior margin of vertex somewhat flattened (Fig. 2D); color usually brown, yellow in northern parts of range ..... *bilimeki*
- Scape relatively long (SI typically 103–125, upper cloud of points in Fig. 1); posterior margin of vertex more rounded (Fig. 2 B, C, E); color brown or yellow 2
2 Color clear yellow orange (gray brown in one population on Caribbean coast of Panama); typically nesting in live plant cavities in wet forest understory ..... *anastasii*
- Color red brown to nearly black; typically nesting in open, disturbed habitats 3
3 Scapes relatively shorter (SI 108–114, see Fig. 1) (major worker with face uniformly red brown) ..... *jamaicensis*
- Scapes relatively longer (SI 114–125, see Fig. 1) (major worker with face bicolored, dark red brown anteriorly, yellow posteriorly) ..... *punctatissima*

With the exception of *P. punctatissima*, the major workers of these species cannot always be identified. *Pheidole punctatissima* is readily distinguished from the other three by the distinctive coloration of the face (bicolored, dark brown anteriorly, yellow posteriorly). Major workers of the other species are the same color as their associated minor workers. Thus major workers of *P. anastasii* are usually yellow, and major workers of *P. bilimeki* and *P. jamaicensis* are usually red brown. However, color variation parallels that seen in minor workers.

Formal synonymy of the four species treated here is as follows:

***Pheidole anastasii* REVISED STATUS**
Figure 1, 2, 3

Pheidole anastasii Emery 1896:76. Syntype minor, major worker: Jimenez, Costa Rica [MCSN] (examined).
Pheidole bilimeki Mayr: Wilson 2003:378 (incorrect synonymy).

Pheidole bilimeki
Figure 1, 2, 3

Pheidole bilimeki Mayr 1870:985. Lectotype major worker: Mexico (Bilimek) [NMW] (examined).
Pheidole punctatissima subsp. *annectens* Wheeler, W.M. 1905:93. Lectotype major worker: Mangrove Key, Andros Island, Bahamas (Wheeler) [MCZC] (examined). Wilson 2003:378: junior synonym of *bilimeki*.*Pheidole floridana*