

Key to *Myrmecocystus* workers (adapted from Snelling, 1976 & Snelling, 1982)

with annotations on cryptic species complexes. Note that while subgenera do not completely hold up (see van Elst, et al. 2020), they provide a convenient separation for keying out the species.

Key to subgenera:

1 Integument light yellow or brownish yellow; mandibles eight to ten toothed; eye large, maximum diameter much exceeding length of first flagellomere; ocelli absent or much reduced; nocturnal ----- **subgenus *Myrmecocystus***

- Head and mesosoma either: **(a)** bicolorous, ferruginous, gaster black, **(b)** unicolorous ferruginous or orange, or **(c)** unicolorous blackish or dark brown; mandible six or seven toothed; eye small, maximum diameter less than to slightly exceeding length of first flagellomere; ocelli present, sometimes obscure in small individuals; diurnal, matinal, or crepuscular ----- **2**

2 Small ($HL \leq 1.26$ mm), uniformly blackish or dark brown, usually with anterior one-third of head paler; erect hairs very reduced on head and mesosoma (two exceptions); pubescence sparse on head; usually crepuscular or matinal ----- **subgenus *Eremnocystus***

- Larger ($HL > 0.83$ mm), either bicolorous or ferruginous; usually abundantly hairy, erect hairs numerous on head and mesosoma, appressed pubescence usually dense on third tergum; diurnal - ----- **subgenus *Endiodictes***

Key to species of subgenus *Myrmecocystus*

1 Dorsal surface of propodeum strongly, angularly projected upward over posterior two-thirds; erect hairs very sparse, with few or none on outer face of hind tibia; upper eye margin little below upper margin of head ----- **2**

- Dorsal surface of propodeum either flat or evenly convex; body often abundantly hairy; upper eye margin usually well below upper margin of head ----- **3**

2 With at least two erect pronotal hairs as long as apical breadth of scape; first tergum with a few erect hairs on disc; hind tibia with a few erect hairs on outer face beyond basal third ----- *ewarti*

- Erect pronotal hairs, when present, shorter than apical breadth of scape; first tergum without erect hairs on disc; hind tibia without erect hairs on outer face beyond basal third ----- *pyramicus*

3 Fully erect hairs conspicuous on dorsum of mesosoma, discs of first and second terga, and on scape and tibiae ----- **4**

- No hairs on dorsum of mesosoma, discs of first and second terga, scape or tibiae ---- *christinae*

4 Head, pronotum, and gaster shining, with little or no appressed pubescence; mid and hind tibiae with not more than 3 or 4 erect hairs beyond basal third of outer face, usually none; upper eye margin coincident with occipital corner; metanotal suture deeply impressed and dorsal face of propodeum convex ----- *navajo*

- Head, pronotum, and gaster with abundant appressed pubescence; mid and hind tibiae usually with numerous erect hairs along apical half of outer face; upper eye margin often distinctly below occipital corner; if metanotal suture impressed, HL > 1.3 mm ----- **5**

5 Smaller, moderately polymorphic species, HL 0.8-1.4 mm; metanotal suture not impressed; propodeum higher than long, juncture of dorsal and posterior faces abruptly rounded, often subangulate ----- *testaceus*

- Large, highly polymorphic species, HL 1.0-2.0 mm or more, usually in excess of 1.3 mm; metanotal suture usually impressed and propodeum as long as high or longer, juncture of dorsal and posterior faces broadly rounded ----- **6**

6 Eye with numerous erect hairs which are longer than diameter of ocular facets; mandibles with 8 or 9 teeth; color uniformly brownish, gaster a little darker ----- *melanoticus*

- Eye with erect hairs, when present, very diffuse, length less than diameter of ocular facets; mandibles with 9 or 10 teeth; color usually distinctly yellow, but may be extensively brownish in southern populations ----- **sp. cf. *mexicanus* spp.***

* Recent molecular data (van Elst, et al. 2020) suggests that *mexicanus* consists of two species, with preliminary data suggesting that hair density separates these two putative forms. Snelling (1976) discussed this character saying, that workers from Colorado and Utah are, as a rule, more densely hairy than some from California and Baja California.

Key to species of subgenus *Eremnocystus* (note that there are 3 undescribed species from Baja California, Mexico, that are not included in key)

1 Antennal scape and dorsum of propodeum without fully erect hairs ----- **2**

- Antennal scape usually, and dorsum of propodeum always with some fully erect hairs (propodeal hairs may be short and inconspicuous in *M. perimeces*; this species has an unusually elongate head, CI = 70-81) ----- **3**

2 Pronotum and mesomotum with at least 8 conspicuous, fully erect white hairs; petiolar scale strongly compressed in profile, crest distinctly notched ----- *lugubris*

- Pronotum and mesosnotum each with no more than 2 fully erect hairs; petiolar scale not notably compressed, crest slightly concave or flat, not conspicuously notched ----- *creightoni*

3 Scape and tibiae without erect hairs and head unusually elongate (CI = 70-81) ----- *perimeces*

- Scape and/or tibiae, usually both, with conspicuous fully erect hairs or head moderately broad (CI > 89) ----- **4**

4 Scape with no erect hairs, except at apex; femora and tibiae with few erect hairs, none on dorsal femoral surface; petiolar scale thick in profile, crest flat or slightly convex ----- *yuma**

- Scape with conspicuous erect or semierect hairs; femora and tibiae with abundant erect hairs, some present on dorsal femoral surfaces; petiolar scale variable, but often compressed with summit distinctly notched ----- **5**

5 Scape with numerous fully erect hairs; malar area with 10+ erect hairs in frontal view and second tergum fully as densely pubescent as first ----- *hammettensis*

- Scape with scattered erect and numerous suberect to subdecumbent hairs; malar area with fewer than 6 erect hairs in frontal view; if more, pubescence of second tergum much less dense than that of first ----- **6**

6 Pubescence of second tergum much sparser than that of first ----- *arenarius*

- Pubescence of second tergum as dense as that of first ----- **7**

7 Appressed pubescence abundant on frons and third tergum; petiolar scale thick, at level of spiracle distinctly more than twice the length of the spiracle, crest flat or convex ----- *colei*

- Appressed pubescence sparse on frons and third tergum; petiolar scale thin, at spiracle less than twice the length of spiracle, crest conspicuously notched ----- *tenuinodis*

* Note that *M. yuma* and *M. tenuinodis* both occur in the same general geographic range, which includes western Arizona and southern California. However, in the experience of R.A. Johnson, *M. yuma* is the much more common and easily found species, whereas *M. tenuinodis* seems uncommon and difficult to find.

Key to species of subgenus *Endiodioctes*