

Agapostemon of the tallgrass prairie region and eastern North America

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Males:

1. S4 entirely flat, without a low, transverse swelling along the apical or preapical margin; S5 and S6 usually all dark brown to black, without any yellow maculations; hind femur not much larger than mid-femur (e.g., about 4x as long as broad), usually lacking a dark stripe on posterior surface; gonostylus terminating in an apical stylus

.....**virescens** (Fabricius)

[Note: A. coloradinus is a Great Plains species which may occur in western portions of Iowa, Missouri, etc. (there are records from eastern KS): it is similar to virescens but slightly larger, and the dark stripe on the posterior surface of the hind femur is present in coloradinus. Also, the inner gonostylar flap of coloradinus lacks a pronounced, medially-directed process at its base, which is present in virescens.]

S4 with a low, transverse swelling along the apical or preapical margin (often easy to overlook, best seen in oblique lateral view); S5 and S6 usually yellow in part; hind femur variable, but often conspicuously larger than mid-femur, appearing inflated, its length about 3x its maximum width or less; gonostylus variable, apical stylus may or may not be present.....2

2(1). Gonostylus broad, flap-like, lacking an apical stylus directed medially.....3

Gonostylus with an apical stylus directed more-or-less medially.....5

3(2). Hind femur greatly swollen like a balloon, its length and width equal or nearly so; hind femur with a sharp tooth or angulate process ventro-apically; hind basitarsis with a ventro-basal keel or carina; wing membranes clear; western species of unlikely occurrence in TGP/Midwest region.....**femoratus** Crawford

Hind femur swollen or not, **if** so then its length at least 3 times its width, ventro-apical tooth present or absent; hind basitarsis without a ventro-basal keel or carina.....4

4(3). Hind femur somewhat swollen (about 3x as long as broad), larger than mid femur; ventral margin of hind femur with a small distinct spicule or spur subapically; T1 usually dark basally; tergites with black bands as wide or wider than yellow bands

.....**sericeus** (Forster)

[Note: A. sericeus and A. texanus are common in much of the TGP and midwest, and while the genitalia of the two species are quite different, the two are otherwise very similar; however, the small spicule on the ventral surface of the hind femur in sericeus usually projects perpendicularly from the surface of the femur, while in texanus the spicule is more toothlike and somewhat flattened, and projects at an angle from the surface of the femur, and the surface of the femur is somewhat concave distal to the tooth, entire in sericeus.]

Hind femur not swollen, and little if any larger than mid femur; ventral margin of hind femur entirely simple, without a small spicule, tooth or spur subapically; T1 usually light-colored basally (yellow to amber); tergites with yellow bands wider than brownish bands; species of western US, occurring east to eastern edge of Great Plains

.....**melliventris** Cresson

[Note: A synonym of Ag. melliventris, Ag. fasciatus, has recently been recognized as a separate species, and may stray into western portions of the TGP: the two can usually be separated by the color of the trochanters: all yellowish in melliventris, metallic green in fasciatus.]

5(2). Hind basitarsus with inner basal margin possessing a darkened, linear callus; hind femur swollen, its LxW about 2:1; hind femur usually with very minute spicule ventrally near apex; inner lobe of gonostylus crescentic, not rounded or triangular; sand-obligate species.....**splendens** (Lepeletier)

Hind basitarsus with inner basal margin lacking a darkened, linear callus; hind femur not as swollen, its LxW about 2.5:1 or more; hind femur with a small tooth or angle ventrally near apex, larger than the spicule of *splendens*; inner lobe of gonostylus rounded to broadly subtriangular, not crescentic; in many habitat types

..... **texanus** Cresson

[Note: *A.angelicus* is a western species very similar to *texanus*, and the two are sympatric at the eastern edge of the Great Plains; compared to *texanus*, the hind femur is usually slightly less swollen in *angelicus* (about 3:1), and the inner lobe of the gonostylus in *angelicus* is reduced to a more triangular shape rather than a broad lobe, and the base of the gonostylus is more inflated.]

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Females:

1. All tergites metallic green like thorax.....2
Tergites blackish or amber-colored, not metallic green.....4

2. Scutum and scutellum "doubly punctate", i.e., with uniformly scattered large punctures on a more finely, densely punctate background (*note that this is a variable character, both the larger punctures and the smaller finer punctures varying in density and coarseness*); pronotum with dorso-ventral ridge and dorso-lateral angle relatively sharp and right-angled; wings not infuscated, mostly clear.....**texanus** Cresson
[Note: *A.angelicus* is a western species very similar to *texanus*, and the two are sympatric at the eastern edge of the Great Plains. They can usually be separated by the micropunctations/microsculpture on the "shoulder" of T1: dense and dull in *texanus*, slightly sparser and shinier in *angelicus*; in addition the wings are *slightly* cloudy in *texanus* but very clear in *angelicus*.]
Scutum densely punctate, rugoso-punctate or weakly reticulate, but not "doubly punctate" (*if* there is a suggestion of the scutum being doubly-punctate, *then* pronotum with dorso-ventral ridge and dorso-lateral angle blunted, not sharply edged or pointed); pronotum with dorso-ventral ridge and dorso-lateral angle variable, wings variable.....3

3. Pronotum with dorso-ventral ridge and dorso-lateral angle blunted, not sharply edged or pointed, the dorso-lateral angle not forming a distinct right angle in dorsal view; wings lightly infuscated; sand-obligate species.....**splendens** (Lepeletier)
Pronotum with dorso-ventral ridge sharply-edged, and dorso-lateral angle pointed and produced at a distinct right angle in dorsal view; wings usually clear; in various habitats.....**sericeus** (Forster)
[Note: *Ag. femoratus* Crawford is a western species that is nearly identical to *Ag. sericeus*, and females of the two are easily confused (the males are easily separated, see male key). Their ranges are mostly separate, but there are a few records of *Ag. femoratus* from MO and southeastern ND; these are, however, female records. Nevertheless, it is possible that *femoratus* occurs in the TGP/Midwest region. Because of the difficulty in separating the females, records of *femoratus* in our area should be based on males: see male key].

4. Clypeus blackish in apical 1/2 or so, tergites all blackish; usually 12mm in length, occ. more.....**virescens** (Fabricius)
[Note: *A. coloradinus* is a Great Plains species which may occur in western portions of Iowa, Missouri, etc. (there are records from eastern KS): females of *coloradinus* have much finer punctation on the tergites than do *virescens* females, finer striations on the genae than do *virescens* females, and are generally noticeably larger in size than *virescens* females.]
Clypeus yellow apically; tergites blackish to amber-colored; smaller, usually less than 12 mm in length; Great Plains species in part, rare east of the Great Plains ..
.....**melliventris** Cresson
[Note:A former synonym of *Ag.melliventris*, *Ag.fasciatus* has recently been recognized as a separate species that may stray into the western portions of the TGP: the two can usually be separated by the color of the scape: yellow in *melliventris*, blackish in *fasciatus*.]

References: Janjic and Packer (2003), Roberts (1972)