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### On the Subfamily Astatinae. Part III. A New Genus of Mexican Astatinae, with Notes on Related Genera (Hymenoptera: Sphecidae)<sup>1</sup>

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#### ABSTRACT

A new genus and a new species, *Uniplectron azureum*, are described from Mexico and their relationships to other Astatinae are discussed. A key is given to the 4 genera of Astatinae in North America.

Until recently the subfamily Astatinae has generally been divided into 2 genera: *Astata* and *Diploplectron*. Parker (1962) treated *Dryudella*, formerly considered a subgenus of *Astata*, as a genus. A recent collection made in Mexico turned up an undescribed genus and species which raises the number of astatine genera to 4.

Since there is some overlap in the generic concepts of *Dryudella* and *Diploplectron*, it could be argued that instead of establishing another genus, it might be better to combine them. After considerable study I feel that these genera are biologically distinct and combining them would obscure their distinctiveness. Furthermore, the new genus is the most generalized and should be set apart.

#### KEY TO THE NORTH AMERICAN ASTATINE GENERA

1. Antenna with 13 segments; abdomen with 7 visible tergites; males ..... 2

- Antenna with 12 segments; abdomen with 6 visible tergites; females ..... 5
- 2. Compound eyes dichoptic ..... 3
- Compound eyes holoptic ..... 4
- 3. Second submarginal cell receiving both recurrent veins (Fig. 3); anal lobe of hind wing not indented (Fig. 3); flagellomere V as long as VI ..... *Uniplectron* Parker
- Second submarginal cell receiving 1 recurrent vein; anal lobe of hind wing deeply cleft; flagellomere V shorter than VI ..... *Diploplectron* Fox
- 4. Distal breadth of median clypeal lobe less than length of last antennal segment; frons and mesopleuron marked with white pigmentation or body metallic blue ..... *Dryudella* Spinola
- Distal breadth of median clypeal lobe much greater than length of last antennal segment; frons and mesopleuron without white pigmentation, no metallic blue species ..... *Astata* Latreille
- 5. Pygidium bordered with marginal, stout, recurved spines ..... *Astata* Latreille
- Pygidium bordered with a few setalike hairs ..... 6
- 6. Second submarginal cell receiving 1 recurrent vein; flagellomere I as long as II; black and red species ..... *Diploplectron* Fox
- Second submarginal cell receiving both recurrent veins, if first recurrent vein is interstitial, then clypeus is truncate and without teeth (*bella* (Cr.)); metallic blue, or red and black species... 7

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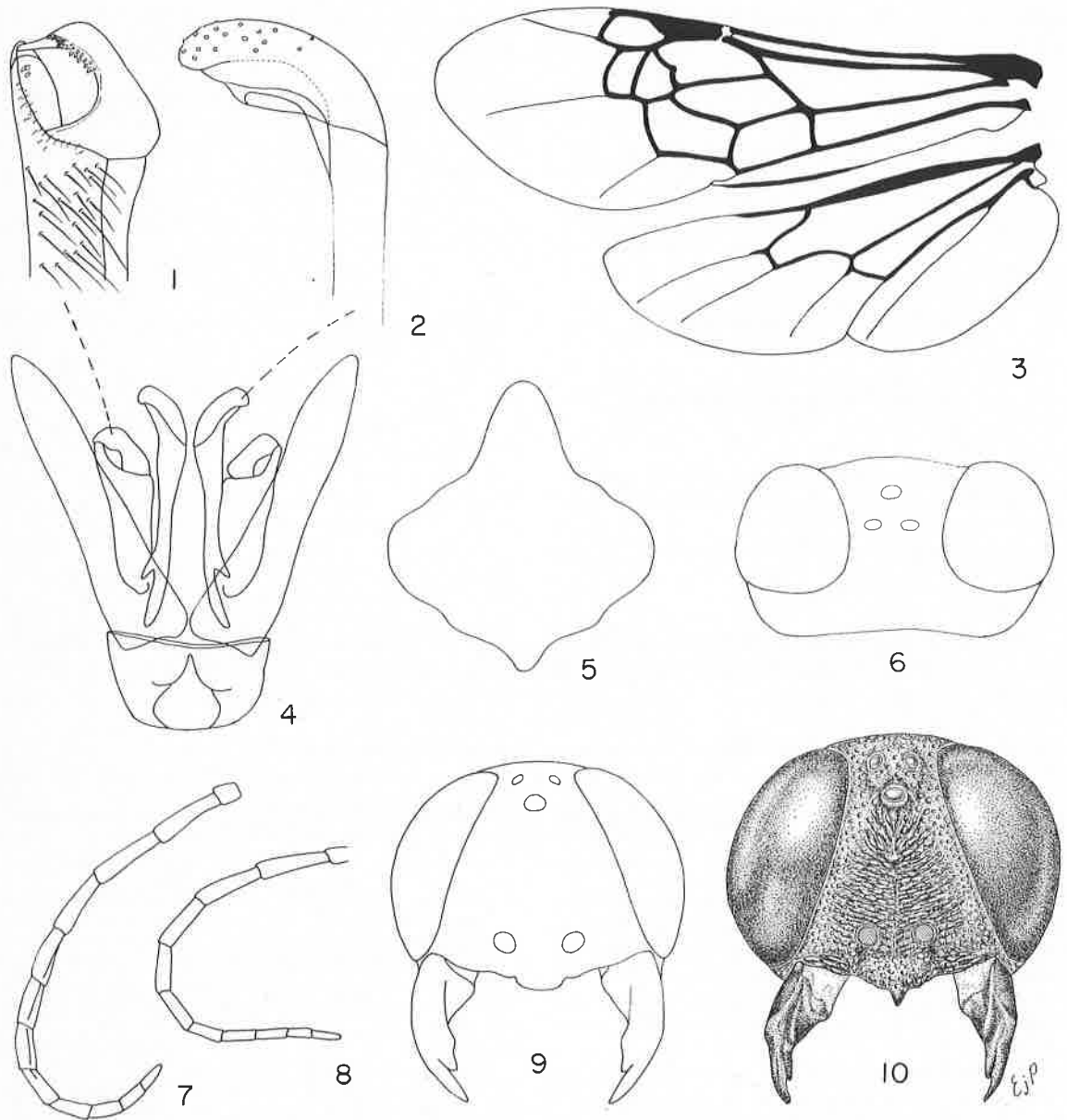


FIG. 1-10.—Anatomical features of *Uniplectron azureus*. 1, cuspis, digitus; 2, lateral view of distal part of aedeagus; 3, fore and hind wings; 4, ventral view of genital capsule; 5, sternite VII; 6, dorsal view of ♂ head; 7, ventral view of ♂ antenna; 8, dorsal view of ♀ antenna; 9, front view of ♀ head; 10, front view of ♂ head.

7. Color metallic blue; clypeus with round median lobe (Fig. 9).....*Uniplectron* Parker  
 Color black and red, if metallic blue then clypeus with 3-toothed median lobe.....*Dryudella* Spinola

***Uniplectron*, new genus**

Type-species: *Uniplectron azureum*, new species.

*Diagnosis*: Malar space of males short, less than diameter of lateral ocellus; male flagellomeres with tyloides, flagellomere V not reduced, females with flagellomere I only slightly longer than II; median clypeal lobe round in females, single-toothed in males; compound eyes dichoptic in both sexes; labial palpo-

mere II triangular, palpomere III arising near base of II; setae on labrum simple; legs, especially femur, stout, male coxa without modifications; marginal cell exceeding third submarginal cell, second submarginal cell receiving both recurrent veins, hind wing with anal lobe not enlarged nor indented; length and breadth of abdominal segments III and IV about the same as II; body without white pigmentation.

A wasp much like *Uniplectron* probably was the progenitor of both the *Diploplectron* and *Dryudella* lines of the Astatinae. The wing venation is similar to that of *Dryudella*, but *Uniplectron* has not developed the broad anal lobe. Additionally, the eyes

are dichoptic and the malar space is shorter. *Uniplectron* is more generalized than *Diploplectron* in that the wing venation is more complete and the flagellomeres are not reduced. It is conceivable that from a form like *azureum*, 2 biologically and morphologically distinct stocks have developed. Members of *Diploplectron* have assumed an antlike form and habit. The adults are found walking or hopping on the ground among weeds and mats, rarely flying. The males do not perch. Most members of *Dryudella* are not antlike. Furthermore, the males have developed the holoptic eyes and the broad hind wings which seem to be connected with their perching habits.

*Biology*.—The nesting habits and the prey are not known. The strong tarsal rake of the female indicates that it, like other Astatinae, is ground nesting.

*Uniplectron azureum* Parker, new species

*Holotype Male*.—Metallic blue; fore wing stained brown, darker apically with violaceous reflections; hind wing lightly stained. Pubescence silvery white, of moderate length and thickness; several dark bristles above median clypeal lobe; sternites with apical row of dark bristles. Punctuation dense on body, pits on head, thorax elongate, alveolate, especially on frons; summit of scutellum shiny, sparsely pitted; dorsal surface of propodeum finely reticulostriate, striae radiating from metanotum; abdominal tergites closely micropunctate; sternum glabrous with large macropunctures; abdominal sternites glabrous with large macropunctures, sternites progressively more punctured caudally. Mandible with 2 stout teeth along inner margin, blunt; clypeal lobe with single median acute tooth (Fig. 10); flagellomeres with linear tyloides on IV–VI and basally on VII (Fig. 7); interocellar distance equal to length of flagellomeres IV and V taken together; malar space short, less than width of lateral ocellus; dorsal surface of propodeal enclosure with disclike posteromedian depression;

sternite II not humped in profile; apical margin of sternites not emarginate; genitalia as in Fig. 4; length 8 mm.

*Female*.—About the same as male, except: median clypeal lobe short, round; malar space shorter, mandible touching compound eye; pubescence shorter, darker on sternum and sternites, with row of dark bristles along clypeal margin; hind coxa slightly indented laterally; pygidium flat, broad, only extreme apical margin bounded by carina.

*Types*.—Holotype ♂, Plan de Barrancas, Jalisco, Mexico, III-24-62 (F. D. Parker: L. A. Stange). Paratypes, 13 topotypical ♂, same data as holotype; 1 ♀ 3 mi N.W. Petlalcingo, Puebla, Mexico, IV-3-62 (F. D. Parker: L. A. Stange). Holotype deposited in the type collection at the University of California, Davis. Paratypes deposited in the collections of the British Museum (Natural History); United States National Museum; University of California, Davis; Zoological Institute, Warsaw; and California Academy of Sciences.

*Systematics*.—In general appearance *azureum* is similar to the blue *Dryudella caerulea* (Cresson). However, the resemblance is only superficial and *azureum* can be separated in the males by its dichoptic eyes, and in the females by its short, round clypeal lobe.

*Habits*.—The type-series was collected in an arid tropical habitat, where the wasps were observed among the thorny branches of *Acacia*. They continually flicked their wings in the manner of a pompilid as they crawled among the branches.

*Range*.—I have examined specimens from the Mexican type localities only.

REFERENCE CITED

- Parker, F. D. 1962. On the subfamily Astatinae, with a systematic study of the genus *Astata* of America north of Mexico. *Ann. Entomol. Soc. Amer.* 55: 643-59.