THE \textit{CICINDELA} FAUNA OF MEXICO: RANGE EXTENSIONS, ADDITIONS, AND ECOLOGICAL NOTES (COLEOPTERA: CICINDELIDAE)

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Abstract

Fifty eight new state records for 35 species of Mexican \textit{Cicindela} are listed, along with habitat information for each species. One species, \textit{C. prae-textata} LeConte, and two subspecies, \textit{C. hamata monti} Vaurie and \textit{C. circumpicta johnsoni} Fitch, are recorded from Mexico for the first time. Localities for specimens which may represent 4 undescribed subspecies are listed, but further collecting and ecological studies are needed before these taxa are described.

Introduction

Although there is no recent revision of the cicindelids of Canada and the US, these beetles are well known and intensively studied by many individuals. The Mexican cicindelid fauna is much more poorly known. Since early in this century only 5 papers have been published dealing entirely with Mexican cicindelids (Cazier 1948, 1954, 1960; Richman 1969; Rotger 1975); these are primarily reports of collecting activities. Cazier's (1954) review of the Mexican \textit{Cicindela} fauna is the most comprehensive coverage for the country, useful for its taxonomic content, distributional data, and general habitat descriptions.

Cazier (1954) listed 78 species of \textit{Cicindela} from Mexico. Thirty three of these species are polytypic, and 110 specific and subspecific taxa are listed from Mexico. Cazier (1960) and Rotger (1975) added new locality records and range extensions for some of these taxa.

My collecting in Mexico over the past 7 years has yielded several additional state records and some probable new subspecific taxa. Other state records obtained from private and institutional collections are included here to bring the knowledge of the group in Mexico up to date. The following information is listed for each taxon: 1) state, 2) exact locality, 3) date, 4) number of specimens collected, and 5) depository if other than my collection. In addition, general distributional data and pertinent ecological information are given. This paper is intended to report more than just range extensions; I hope it will encourage additional study of the many questions on zoogeography, ecology, and taxonomy of the Mexican cicindelid fauna. Representatives of most species will be deposited in the Department of Entomology, Texas A&M University collection. The order of the species listed follows that of Cazier (1954). Mexican state names are italicized; new state records are capitalized.

Species Accounts

\textit{C. oregona} LeConte—Polytypic, widely distributed in the western portions of the United States and Canada. Cazier (1954) listed the nominate subspecies as occurring
in northern Sonora but did not specify an exact locality. A specimen from Baja California [Sierra S. Pedro Martir Cyn. betw. La Grulla & Rancho Viejo, 15.VI.1953 (1, CAS)] adds a more exact locality. C. oregona is usually collected near alkaline or fresh water habitats.

C. chrysippe Bates—Cazier (1954) did not have specimens of this rare, monotypic species available for study and mentioned only the type locality “Ciudad” in Durango”, probably the town of La Ciudad, Durango according to Selander and Vaurie (1962). An additional locality record in Durango [24 mi W La Ciudad, 20.VI.1964, 7000 ft (11, CNC); 28.VI.1964 (1, CNC)] should help in ascertaining its habitat. A single specimen from SINALOA [Palmito, 24.VI.1970 (1)] extends the distribution further westward. This species probably occurs along both hillside road cuts and trails, and specimens fly into vegetation when disturbed (H. F. Howden, pers. comm.).

C. aterrima Klug—Monotypic, distributed in an arc from central Chihuahua to Hidalgo (Cazier 1954), recently reported from San Luis Potosi (Cazier 1960) and Veracruz (Rotger 1975). Specimens from QUERETARO [1 mi N Tequisquiapan, 4.VII.1973 (1)] and PUEBLA 17.9 mi NE Zacatepec, 26.VI.1973 (54); 27.VII.1974 (27)] are similar to the black or purplish specimens from previously known localities. The series collected near Zacatepec was found on bare areas among short grasses near a dry, shallow pond.

C. rugatilis Bates—Monotypic, distribution similar to that of C. aterrima, from Durango to the Distrito Federal (Cazier 1954, 1960). Now recorded from MICHOACAN [1 mi N Irimbo, 6.VII.1973 (6)]. These specimens are the typical dark brown color of specimens from more northern areas. They were collected in a sparsely vegetated alluvial fan leading out of a wash. Specimens from several localities in Durango were collected in roadside ditches, intermittent creeks, and sparsely vegetated, eroded areas on hillsides.

C. semicircularis Klug—Monotypic, only encountered in the higher elevations (usually above 7000 ft), distribution similar to C. aterrima and C. rugatilis, from central Chihuahua to Hidalgo and the Distrito Federal (Cazier 1954). A single specimen collected in southern SAN LUIS POTOSI [22.3 mi N hwy junction to Dolores Hidalgo on hwy 57, 25.VII.1976 (1)] extends the distribution northward in the eastern portion of its range. The specimen was encountered in open pastureland on bare areas among closely grazed grasses, a habitat similar to that where additional specimens have been collected in Chihuahua and Mexico. Cazier (1954) notes that “...the color in the series from Durango and Chihuahua is rather constant, but a few specimens are more greenish or have a purplish tinge.” My series of 37 specimens from Chihuahua, Durango, Mexico, and San Luis Potosi appears dark brown to black when viewed with the naked eye, but under magnification they appear reddish brown and the foveae are tinged with blue or purple.

C. nigrilabris Bates—Monotypic, distributed from Chihuahua to Hidalgo in a pattern similar to C. aterrima, C. rugatilis, and C. semicircularis (Cazier 1954, 1960; Rotger 1975). A specimen from MICHOACAN [Capula, Hwy 15, Km 337, 13 mi W Morelia 13.VII.1969 (1, TTU)] fills in a previously unreported portion of the range. This species is collected in higher elevations among short, sparse grasses.

C. obsoleta Say—Polytypic, widely distributed in southwestern US, represented by 4 subspecies in Mexico, all restricted to the northwestern portion of the country (Cazier 1954, 1960). A single specimen which keys to C. obsoleta in Cazier (1954) was collected at the southern edge of TAMALIPAS [14 mi N Tampico, 24.VI.1973 (1)] and may represent a new subspecies. This specimen does not agree with descriptions of any of the known subspecies, and the nearest geographic subspecies of C. obsoleta is C. o. neojuvenilis Vogt which is from extreme southern Texas. I doubt that the Tamaulipas specimen represents a range extension for C. o. neojuvenilis since its body form and maculation are much different. It was collected among scattered grasses and herbs growing in a shallow roadside gravel pit.

C. punctulata Olivier—Two subspecies reported for Mexico, C. p. catherinae Chevrolat with a distribution pattern similar to C. aterrima, and C. p. chihuahuae Bates,
widely distributed in the western US and extending down into Chihuahua in a narrow band just east of the northern range of *C. p. catharinae* (Cazier 1954). The nominate subspecies is not found in Mexico, but Cazier (1954) reports intergrade (*punctulata-chihuahuae*) specimens from Saltillo, Coahuila. Additional representatives of the intergrade population have been found in NUEVO LEON [9 mi W Iturbide, 3.VII.1974 (6)] where they were collected from a roadside gravel pit.

*C. cyaniventris* Chevrolat—Monotypic, closely related to *C. papillosa* Chaudoir and perhaps conspecific (Cazier 1954), distributed in eastern Mexico from southern Tamaulipas into Guatemala and British Honduras. The relationship of *C. cyaniventris* to *C. papillosa* can possibly be solved by series of specimens with accurate and detailed ecological data which can be correlated with local population variability. For now they are considered as distinct species. New state records are JALISCO [10.8 mi S Talpa de Allende, 9.VIII.1967 (1, UA)] and CHIAPAS [29 mi SW Ceiba, 8.VII.1971 (3); 25 mi SW Cintalapa, 11.VII.1971 (8); 8 mi NE San Cristobal de las Casas, 6.V.1969 (1, HFH); Lacanja-Chansavab, 30.VIII.1977, 300 mts (6, BCK); Montebello, 5.VII.1975, 1550 mts (2, BCK) 4.9 mi N Frontera Comalapa, 18.VI.1966 (2, UA); 11.6 mi N Ocozocuautla, 10-13.VI.1966 (1, UA); Yerba Buena Hosp., 1.5 mi N Pueblo Neuvo, 21-22.VI.1972 (1, UA)]. I have collected specimens of *C. cyaniventris* on bare areas such as dirt roads and trails or roadside flats where the substrate is slightly moist.

*C. papillosa* Chaudoir—Monotypic, reported from southern Durango southward along the southwestern portion of Mexico into Central America as far south as Panama (Cazier 1954) and from Puebla (Rotger 1975). Recently collected specimens extend the distribution pattern northeastward to QUERETARO [23 mi E Jalpan, 23.VII.1970 (1)] and SAN LUIS POTOSI [6 mi N Tamazunchale, 30.VII.1960 (1, CNC)]. Additional new state records are JALISCO [S edge of Guadalajara at periferico, 11.VII.1973 (1), MORELOS (Atongo, 25.VI.1975, 1650 mts (1)], and CHIAPAS [20-25 mi N Huixtla, 1.VI.1969, 3000 ft (1, CNC); 5 mi E junct. 17+190, 11.VI.1969 (1, HFH); 6 mi NE San Cristobal de las Casas, 19.V.1969 (1, HFH)]. My specimens were collected on bare, moist upland substrates such as dirt roads and sheet eroded hillsides.

*C. guerrerensis* Bates—Monotypic, until recently known only from Guerrero, only 3 specimens examined by Cazier (1954) who mentions both the typical coppery red color and a single blue specimen with purple reflections. Those reported by Rotger (1975) from northern Guerrero and Morelos are also coppery red as are specimens from PUEBLA [13.3 mi NE Tehuitzingo, 13.VII.1974 (11)] and OAXACA [57 km N Tamazulapan, 8.VIII.1967, 6460 ft. (1)]. Previously unreported specimens from COLIMA [10 mi S Pihuamo at Colima-Jalisco state line, 13.VII.1973 (1); 12 mi E Colima 28.VII.1953 (1, AMNH) are dull green in color, indicating that *C. guerrerensis* may be polytypic, with the lowland forms near the coast probably representing an undescribed subspecies; however, additional specimens with accurate ecological data from intervening areas are necessary to adequately justify the description of a new subspecies. The habitat of *C. guerrerensis* has not been recorded, but this species is associated with drainage systems and prefers shaded habitats with a bare, moist substrate. I have collected specimens on clay banks of creeks (Morelos), sandy margins of creeks (Puebla, Guerrero), and on a gravel road moistened by a seep (Colima).

*C. aeneicollis* Bates—Monotypic, distributed along western Mexico from southern Sonora to southern Oaxaca (Cazier 1954). Reddish, green, and blue color forms are known but cannot be correlated with any distribution pattern since there are localities where all 3 forms coexist (Cazier 1960). Additional specimens with ecological data may help solve this problem. Specimens from MEXICO [2.6 mi S hwy 57D on hwy 55, 9.7 mi N San Jeronimo, 26.VII.1976 (1); Valle de Bravo, 3.VIII.1975, 2150 mts (2, BCK) and Tonatico, 19.V.V.1975, 1750 mts (1, BCK)] and PUEBLA [13.3 mi NW Tehuitzingo, 13.VII.1974 (2)] extend the distribution to the northeast, and one from CHIAPAS [8 mi NE San Cristobal de las Casas, 6.V.1969 (1, HFH)] extends the distribution further south. Cazier (1954) notes that *C. aeneicollis* is collected in bare, dry areas away from water. This habitat is similar to that in which I have encountered
the species in *Puebla*, *Oaxaca*, *Jalisco*, *Guerrero*, *Michoacan*, *Colima*, and *Puebla*.

*C. fera* Chevrolat—Monotypic, distributed in a deep U near the Mexican coastlines, from northern *Sonora* southward to western *Chiapas* and northeastward to northern *Veracruz*, isolated inland populations known from an area of internal drainage in eastern *Durango* and western *Coahuila* (Cazier 1954). Rumpp (1956) also recorded *C. fera* from southwestern New Mexico. Specimens from an additional inland population have been collected in *QUERETARO* [1 mi NW Ayutla, 24-25.VII.1970 (10)] but probably represent inland extensions of the northern *Veracruz* population along drainage systems. Specimens from *COLIMA* [Tecomán, 1.VII.1972 (2, INIA)] fill in a portion of the distribution not reported by Cazier (1954). It is collected along the sandy or silty margins of larger streams, and Cazier (1954) indicates that it is also found along the seashore.

*C. lemniscata* LeConte—Two subspecies known, both extending from northern Mexico into the southwestern United States. One of these, *C. l. rebaptisata* Vaurie, is distributed from *Chihuahua* eastward to central *Tamaulipas*. A new record is from *NUEVO LEON* [Huasteca Canyon near Monterrey, 11.VII.1963 (2, CNC)]. This species occurs in arid upland situations and is commonly attracted to lights.

*C. radians* Chevrolat—Monotypic, occurring in *Veracruz* and *Chiapas* and extending into Central America as far south as *El Salvador* (Cazier 1954). Specimens from *OAXACA* [6 mi S Valle Nacional, 18-20.V.1971, 2000 ft (1, HFH); Km 60 carr. Tuxtepec, Valle Nacional 31.V.1962 (1, INIA)] indicate that the *Veracruz* and *Chiapas* populations may be connected across the Isthmus of Tehuantepec. Cazier (1954) reports that *C. radians* is collected in habitats where the surface is moist. My collecting experience is similar, with all specimens being collected in shaded, moist situations along creeks and dirt roads.

*C. vasseleti* Chevrolat—Monotypic, reported from *Veracruz*, *Chiapas*, and Central America (Cazier 1954, Rotger 1975). Specimens collected in northeastern *OAXACA* [11 mi N Matias Romero, 6.VII.1971 (25); 8.VI.1972 (179); 23.VII.1974 (37)] also indicate that, like *C. radians*, the populations are connected in the Isthmus of Tehuantepec area. Individuals are normally found associated with drainage systems where they prefer shaded, moist, bare areas near vegetation. Cazier (1954) indicates that specimens have been collected on sand bars along rivers.

*C. phosphora* Dejean—Monotypic, previously known from *Colima*, *Guerrero*, and *Morelos*. According to Cazier's (1954) translation of the original description, the elytral coloration of the type is purple, but the specimens seen by him were cupreous dorsally. Specimens that are green dorsally have been collected in *MICHOCAN* [San José Purua, 4.VII.1962 (1)] and *MEXICO* [Km 4, Ixtapan de la Sal-Tonatico Hwy., 20.V.1975, 1800 mts (5)]. According to B. Kohlmann (pers. comm.), the latter specimens were captured on trails through an orchard, a situation similar to the rocky woodland paths mentioned by Cazier (1954). Because these specimens are green and from previously unrecorded northern portions of the range, there may be some justification for describing a subspecies of *C. phosphora*, but additional field work and careful ecological and morphological studies are necessary before this should be done.

*C. hydrophoba* Chevrolat—Polytypic, all 4 subspecies represented in Mexico (Cazier 1954). The subspecies *C. h. taretana* Bates extends from southern *Sonora* southward to *Mexico* and *Morelos* and has recently been collected in *PUEBLA* [13.3 mi NW Tehuitzingo, 13.VII.1974 (1)]; the latter record extends the distribution further eastward. The subspecies *C. h. quinquenotata* Gistl extends from southern *Guerrero* as far south as *Costa Rica* in Central America (Cazier 1954) and is now reported from *CHIAPAS* [29 mi SW Cintalapa, 8.VII.1971 (12); 13.5 mi E Chiapa de Corzo, 10.VII.1971 (22); 25 mi SW Cintalapa, 11.VII.1971 (14); 34 mi SW Cintalapa, 7.VII.1971 (1)] in the intervening area. All subspecies are normally found on dry, bare areas well away from water, although Cazier (1954) reports that *C. h. quinquisnotata* has been collected along sandy streams and moist ravines.

*C. sedecimpunctata* Klug—Polytypic, distributed from the southwestern United States to *Costa Rica*, all 3 subspecies occurring in *Mexico* (Cazier 1954). One of these,
C. s. salei Chevrolat, extends from Michoacan through Chiapas to Costa Rica and back to southern Tamaulipas in a Y-shaped pattern. Additional specimens are reported from QUERETARO [5 mi NW Jalpan, 24.VII.1970 (10); 1 mi NW Ayutla, 24-25.VII.1970 (27)] and PUEBLA [11.8 mi NW Izucar de Matamoros, 13.VII.1972 (1)], extending the eastern portion of its distribution inland. C. sedecimpunctata is usually found associated with water and has been found along streams and ponds on moist ground.

C. rufiventris Dejean—Polytypic, 2 subspecies reported from Mexico, the subspecies C. r. cumalitis LeConte extending from Texas through Tamaulipas and Nuevo Leon to southeastern San Luis Potosi (Cazier 1954). Additional specimens have been collected in QUERETARO [5 mi NW Jalpan, 24.VII.1970 (6)] and VERACRUZ [Fortin, 6-7.VIII.1956 (1)]. This species normally occurs at higher elevations in bare areas surrounded by grasses.

C. clarina Bates—Cazier (1954) recorded this monotypic species only from the area that Halffter (1976) terms the transverse Volcanic System. Specimens from ZACATECAS [4 mi W Monte Escobido (sic), 19-20.VII.1954, 8000 ft (6, FMNH); Hac. Laguna Balderama, 25 mi W Fresnillo 21-25.VI.1954, 7900 ft (1, FMNH)] extend its distribution to the northwest. Cazier (1954) indicates that C. clarina occurs at higher elevations in moist situations such as sandy stream banks and along ravines. I have collected specimens only on moist, sparsely vegetated, eroded hillsides at localities above 7000 ft.

C. ocellata Klug—Listed as C. flavopunctata Chevrolat by Cazier (1954); this name is a junior homonym, and C. ocellata is the valid name (Schilder 1953). Polytypic, ranges throughout Mexico northward into the southwestern US and southward into Central America as far as Costa Rica (Cazier 1954, Rotger 1975). Specimens of C. o. ocellata have been collected in TABASCO [59.4 mi SE Villahermosa, 6-7.VI.1966 (6, UA)], and additional specimens of what appear to be intergrades between nominate C. ocellata and C. o. rectilatéra Chaudoir have been collected in QUERETARO [5 mi NW Jalpan, 24.VII.1970 (3); 1 mi NW Ayutla, 24-25.VII.1970 (27); 2 mi NW Jalpan, 22-24.VII.1974, (1)]. They were collected along the banks of streams. Cazier (1954) mentions that in Jalisco some specimens of the nominate subspecies are green or blue. Specimens from this population were captured in southern Jalisco [San Rafael at Rio Tuxpan, 10.VI.1971 (52)] where 71% of the specimens were the typical dark brown and 29% were green or blue.

C. roseiventris Chevrolat—Polytypic, represented by 2 subspecies in Mexico, the southern population (C. r. roseiventris) ranging from central Veracruz into Central
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America (Cazier 1954). New records from OAXACA [11 mi N Matias Romero, 6.VII.1971 (52); 4.8 mi W Zanatepec, 9.VI.1972 (26)] extend its distribution toward the southwest. These specimens were collected along the sand and silt margins of rivers, a habitat similar to that where Cazier (1954) collected the species.

C. carthagena Dejean—Polytypic, distributed along Pacific coast from northern South America to northwestern Mexico. Cazier (1954) indicates that there are scattered distributional records for C. c. carthagena in Mexico; the present record for COLIMA [Lake Cuyutlan, 7 km NE Cuyutlan, 10.VI.1971 (6)] fills in a portion of this area. The specimens were captured around the muck margins of a saline coastal lake which is filled during the rainy season or by coastal storms but loses a large portion of its water through evaporation.

C. sommeri Mannerheim—Monotypic, easily recognized because the maculation is a deep red rather than white as in other Mexican cicindelids, distributed from northern Sonora to central Oaxaca along the western coast of Mexico and inland to Puebla and Morelos (Cazier 1954). Specimens from CHIAPAS [Arriaga, 7.VII.1966 (2, INIA)] extend the southern distribution. Specimens taken in ZACATECAS [Jalpa (2, BCK)] extend the distribution inland in the northern portion of the range. Specimens are usually found along the moist banks of rivers and streams (Cazier 1954).

C. praecisa Bates—Monotypic, previously recorded only from Morelos, Colima, and Guerrero (Cazier 1954). Specimens from PUEBLA [11.8 mi NW Izuca de Matamoros, 13.VII.1974 (9); 13.3 mi NW Tehuitzingo, 13.VII.1974 (18)], OAXACA [57 km N Tamazulapan, 8.VIII.1967, 6460 ft (2)], and JALISCO [Rio Atenquique, 4 mi S Atenquique, 2.VIII.1966 (1, UA)] extend the distribution northward. Cazier (1954) did not indicate the habitat of C. praecisa. I have collected specimens along the sand and gravel margins of shaded creeks in Puebla, Morelos, and Guerrero.

C. viridisticta Bates—Polytypic, southern Arizona to Oaxaca, all 3 subspecies found in Mexico. The nominate subspecies occurs in Oaxaca and Puebla, and C. v. interjecta W. Horn is known only from the type locality, Guadalajara, Jalisco (Cazier 1954; Rotger 1975). An intergrade (viridisticta-interjecta) specimen was collected in MICHOACAN [Tuxpan, 11.VII.1975, 1900 mts (1, BCK)] on a clay pathway in a pine-oak forest. I have collected specimens of the nominate subspecies near vegetation in low, moist areas such as roadside ditches and around intermittent pond margins.

C. hemichrysea Chevrolat—Listed as a subspecies of C. argentata Fabricius by Cazier (1954). Rivalier (1955), in a study of the subgenus Brasiella, separated C. hemichrysea as a distinct species. The distribution of C. hemichrysea forms a Y beginning on the east coast in Veracruz and San Luis Potosi, extending southward into Central America as far as Panama and returning northward to Sinaloa in western Mexico (Cazier 1954, Rivalier 1955). Specimens from TAMALIPAS [1.3 mi NW Gonzalez, 6.VI.1972 (2)] extend the eastern portion of the distribution northward, and a specimen from SONORA [Navojoa, 2.VIII.1957 (1, INIA)] extends the distribution further to the northwest. The following records fill in gaps in the distribution pattern in JALISCO [S edge of Guadalajara at periferico, 11.VII.1973 (1); 7.6 mi S Sayula, 12.VII.1973 (32)], OAXACA [14 mi S Matias Romero, 6.VII.1971 (8); 8.VI.1972 (5); 23.VII.1974 (7)], TABASCO [S Cd. Pemex, 22.V.1972 (1, UA)], and HIDALGO [10 mi NE Jacala, 20.VIII.1960 (2, CNC)]. The name C. h. inspersa Chevrolat was used by Rivalier (1955) to indicate the C. hemichrysea populations with broad maculation whereas specimens of the nominate C. hemichrysea have reduced maculation. Although there do appear to be differences in maculation and sculpturing between the eastern and western populations, specimens from Chiapas contain individuals with both widened and reduced maculation and could be considered as intermediates. Additional study is necessary in the intermediate area of Oaxaca and Chiapas before the name C. h. inspersa should be used. Cazier (1954) did not record the habitat of C. hemichrysea, but I have collected specimens on bare dry areas along trails and dirt roads (Veracruz, Tamaulipas, Oaxaca, Chiapas) and in dry roadside ditches (Jalisco, Oaxaca).

C. circumpicta LaFerte—Polytypic, distributed from the northern US plains states.
to coastal Texas and *Tamaulipas*, previously only the nominate subspecies recorded in Mexico. A specimen of *C. circumpicta johnsoni* Fitch from COAHUILA [Rte. 57, 66.8 km S Sabinas, 26.VII.1975 (1, UA)] represents a new subspecies record for Mexico. *C. circumpicta* is collected in alkaline habitats along streams, in areas of internal drainage or in coastal tidal flats.

*C. macronema* Chaudoir—Polytypic, along the west coast of Mexico, Central America, and into South America as far as Ecuador, 2 subspecies in Mexico (Cazier 1954). Specimens taken in CHIAPAS [Punta Arista, 5.XI.1974 (3, BCK)] fill in a portion of the distribution of the nominate subspecies not previously recorded. This species is collected on ocean beaches.

*C. hamata* Aoudouin & Brulle—Polytypic, 2 subspecies previously reported from Mexico, nominate subspecies distributed along the east coast in Veracruz, and *C. h. pallifera* Chaudoir known from Yucatan and Tabasco (Cazier 1954, Rotger 1975). Specimens of a third subspecies, *C. h. monti* Vaurie, are recorded in Mexico for the first time from TAMAULIPAS [Playa Washington E of Matamoros, 3.IV.1972 (4); 24.VII.1973 (10)]. They were caught around the margins of tidal pools.

*C. nevadica* LeConte—Polytypics widely distributed in the southwestern US, the nominate subspecies recorded in Sonora (Cazier 1954). Willis (1967) listed the subspecies *C. n. olmosa* Vaurie as occurring in “Acnegas”, Coahuila. This locality is probably the same as that for a series of specimens collected in Coahuila [Laguna Grande, Cuatro Cienegas Basin, 20.V.1975 (29)] which I believe represent an undescribed subspecies of *C. nevadica*. Specimens from the Coahuila population differ from those of *C. n. olmosa* by their larger size, metallic coloration, and absence of an apical hook on the middle band. Further collections from the areas of Mexico adjacent to Texas and New Mexico are necessary before the relationship of the Coahuila population with the other subspecies of *C. nevadica* can be ascertained. *C. nevadica* is collected in alkaline situations along streams or in areas of internal drainage.

*C. praetextata* LeConte—Polytypic, not previously reported from Mexico. A specimen from CHIHUAHUA [Juarez, 19.VII.1952 (1)] represents a new country record. This specimen probably represents *C. p. fulgoris* Casey, the subspecies from western Texas and southern New Mexico. *C. praetextata* is found in alkaline habitats, usually in areas of internal drainage but also along water courses.

**Discussion**

With the addition of *C. praetextata* the number of species of Mexican Cicindela is increased to 79. The addition of *C. hamata monti* and *C. circumpicta johnsoni* brings the total number of Cicindela taxa at the specific and subspecific levels to 113. Undescribed subspecies of *C. nevadica*, *C. obsoleta*, *C. guerrerensis* and *C. phosphora* are expected to bring this number up to 117. Gaps still remain in the distributions of several species within the Mexican fauna, and additional field work is needed to clarify their zoogeographic affinities and existing taxonomic problems at the specific and subspecific levels.

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