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## The Ant-like Flower Beetles of North Central Mexico Collected on the David Rockefeller Mexican Expedition of 1947, and Other Mexican and Central American Anthicids in the American Museum of Natural History (Coleoptera, Anthicidae)

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This paper is based largely on material that was collected on the David Rockefeller expedition of 1947 to the four north central states of Mexico: Chihuahua, Durango, Coahuila, and Zacatecas (Spieth, 1950). Included also are distributional records and taxonomic and biological notes on all the species of Anthicidae from Mexico and the countries of Central America in the American Museum of Natural History collections.

The Anthicidae as considered in this paper are restricted to the old tribe Anthicini, and constitute a very homogeneous family. Other tribes of the earlier family Anthicidae, such as the Eurygeniini, Pedilini, Macratriini, and Xylophilini, are found to have no very close relationship to the family as presently understood. In fact, the first three tribes form the present family Pedilidae, and the fourth tribe forms the family Euglenidae.

The Anthicidae are in general rather small beetles, usually under 5 mm., somewhat pilose, frequently densely so, and ant-like in appearance. The name "flower beetles" probably refers to the habit of many of being

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in or around flowers, but the scientific name of the family comes from that of the typical genus, *Anthicus*, which in Greek means variegated or flower-like.

The Anthicidae are of the heteromerous group of beetles, that is: the tarsi of the first and middle pair of legs have five segments, while those of the hind pair have only four segments. Other characters of the family are the deflexed or drooping head, which is suddenly and strongly constricted at the base into a very small, slender neck; eyes small, entire, oval or rounded, and generally coarsely faceted; antennae 11-segmented, inserted at the side of the head in front of the eyes, mandibles emarginate at tips, last segment of maxillary palpi moderately dilated. Prothorax generally small, at base narrower than the elytra. Abdomen composed of five free segments. Anterior coxae somewhat prominent, conical, coxal cavities open behind, hind coxae not or only slightly prominent, cavities distantly separated, tarsi (with the exception of those of *Mecynotarsus*), with the next to the last segment lobed beneath, tarsal claws simple. The two families Pedilidae and Euglenidae, which might be confused with the Anthicidae, can be separated as follows: In the Pedilidae the eyes are larger, finely faceted, generally emarginate, sometimes oval, and the neck is usually wider. In the Euglenidae the abdomen is composed of four free segments, the first or basal one formed of the first two firmly united, but with the suture sometimes visible; tarsi with the second segment from the last lobed beneath.

When compared with some of the larger beetle families, the family Anthicidae with its approximately 1525 species (Pic, 1911) is comparatively small. While many of the names in Pic's catalogue are synonyms, which reduces this number somewhat, new species described since 1911 undoubtedly augments this number considerably. It is an old family, geologically speaking, and species are found in all parts of the world, even in many remote islands. However, the greatest concentration of species seems to be in the humid temperate regions rather than in the tropics, where most beetle families are strongest. This apparent distribution may be reversed when a more careful survey of the humid tropical regions has been made, for anthicids are so small that they are easily overlooked, and have not been especially collected.

There are nearly 200 species and a few subspecies of Anthicidae listed from North America north of Mexico (Leng, 1920). Over 100 of these were described by Casey (1895) in a single paper, but many are based on uniques and must eventually be reduced to synonymy. Champion (1890) lists 75 species from the Central American countries, of which over 50 were described as new. Blackwelder (1945) for all of South and

Central America and the West Indies lists 260 species and 25 subspecies; of these 93 occur in Central America, with about 60 recorded from Mexico.

In this paper 24 species are discussed, 16 of which are at present restricted to Mexico or Central America. Five have been recorded from both the United States and south of the border. Three, which previously were recorded only from the United States, were taken by the expedition from northern Mexico.

From a review of the distributional records of the 24 species of anthicids, it can readily be seen that in general they fall into two large and distinctive geographical faunal zones in this Mexico-Central American region. The first, by far the largest in area, richest in species, most distinctive, and undoubtedly the most homogeneous, is the humid tropical fauna. This zone extends from southern Mexico south through Guatemala and the other Central American countries into northern South America. Its most northern limit is apparently a line extending approximately from the states of Veracruz on the Gulf of Mexico to Guerrero on the Pacific coast. *Notoxus eximius*, *Formicilla gracilipes*, *Leptaleus albicinctus*, *Anthicus dromedarius*, *A. punctipennis*, *A. asphaltinus*, *A. bactrianus*, *A. championi*, and *A. spinicollis* are representatives of this zone.

The other distinctive faunal zone is the arid highland region of northern Mexico. This extends roughly from north of Mexico City, at approximately the state of Guanajuato, north through the four states covered by the expedition and across the United States border, including the eastern part of Arizona, all of New Mexico, western Texas, and frequently north into Colorado and other midwestern states.

Northeastern Mexico and eastern Texas seem to form a localized faunal zone quite different from the arid highland region. To the west, the state of Sonora and the western part of Arizona form another localized zone with, however, rather close affinities to the highland area. The limiting borders of the arid highland zone are not well marked. Some of the species are restricted to a very small area in it, while others spread out to the farthest limits. Some of the characteristic species of this arid highland region are: *Notoxus bifasciatus*, *N. apicalis*, *N. hirsutus*, and *Anthicus confinis*. *Notoxus ventralis*, *N. fraternus*, and *N. cristatus* extend south into the transition region between the arid highland and the humid tropical zones, while *Notoxus calcaratus* and *N. nuperus* extend westward into the Sonoran. One anthicid, *Notoxus monodon*, appears not to be restricted by any barriers but ranges through all types of ecological conditions from Canada to Argentina.

All that is known about the life cycle, early stages, and habits of these beetles comes from a few scattered notes made by various observers. Anthicids are usually collected by sweeping. In the spring and summer they may be found on the flowers and foliage of various plants and trees; in the United States, oak, wild cherry, hickory, maple, dogwood, hazelnut, and many herbaceous plants and weeds are among those preferred. The adults seem to be attracted to the pollen of the flowers or may be in search of other small insect life, for it is thought that many species are predaceous. It is well known that *Notoxus monodon* (Fabricius) is predaceous on the pupae of *Archips argyrospila* Walker (Gill, 1913) the fruit-tree leaf-roller, a lepidopterous insect. Some species are also attracted to decaying fruit, both dried and fresh. Others are found under leaves or decaying vegetation, drift along beaches, under stones, logs, loose bark, and boards, especially those in damp places. It is in such retreats that species in the temperate regions pass the winter as adults. The few species of larvae that are known are very small, whitish, elongate, slender, and nearly cylindrical. On the caudal end is a small pair of non-segmented, immovable, horn-like appendages. The legs are long, four-segmented, and each is tipped with a claw. The tenth or terminal abdominal segment is large, but located on the ventral side of the ninth segment. The head is rather large, conspicuous, and has only one ocellus on each side. No life cycle of any one species has been completely described. As far as known, none are serious pests, although a few species have been found in shipments of dried fruits.

I wish to thank Dr. Mont A. Cazier, Chairman of the Department of Insects and Spiders, the American Museum of Natural History, also leader of the David Rockefeller Mexican Expedition of 1947, for taking time to read this paper and for helpful suggestions for its improvement. Special thanks go to Dr. David Rockefeller not only for sponsoring the 1947 Mexican expedition, but also for his continued support of the work necessary to publish the results.

In the arrangement of the genera, I have followed the order in Blackwelder (1945), which is the one more or less generally accepted at the present time. No attempt has been made to arrange the species in the genera phylogenetically, because in a paper of this sort, in which only a few species out of a multitude from any particular genus are mentioned, there is no necessity to show relationships.

KEY TO THE GENERA OF ANTHICIDAE OCCURRING OR LIKELY TO OCCUR IN  
MEXICO AND CENTRAL AMERICA

1. Pronotum with a large, anteriorly project process extending over the head . . . . . 2
- Pronotum without such a process near the apex . . . . . 3

2. Tarsi shorter than the tibiae, the penultimate segment slightly dilated . . . . . *Notoxus*  
 Tarsi longer than the tibiae, the penultimate segment cylindrical and not thickened . . . . . *Mecynotarsus*
3. Anterior coxal cavities partly closed behind by the elimination of the posterior emargination . . . . . 4  
 Anterior coxal cavities broadly open behind . . . . . 5
4. Head oval or subquadrate, the eyes large and submedian in position, body small and subglabrous . . . . . *Formicilla*  
 Head oblong, the eyes very small and anterior, body densely and minutely sculptured and pubescent . . . . . *Dilandius*
5. Penultimate tarsal segment not dilated and scarcely at all lobed, the last joint subterminal in insertion; elytra more or less truncate at apex, and frequently greatly abbreviated, eleventh antennal segment bilobed . . . . . *Tanarthrus*  
 Penultimate tarsal segment just visibly dilated, deeply excavated or grooved above, feebly lobed beneath, last joint inserted on top far from apex, elytra entire or nearly so, rounded behind, eleventh segment of antennae simple . . . . . 6
6. Antennae thick and moniliform . . . . . *Tomoderus*  
 Antennae more slender . . . . . 7
7. Anterior portion of prothorax strongly gibbous . . . . . *Leptaleus*  
 Anterior disc more or less transversely grooved behind, middle portion of prothorax transversely convex, posterior portion cylindrical, disc not transversely grooved behind middle . . . . . *Anthicus*

### NOTOXUS GEOFFROY

This genus and the following one (*Mecynotarsus*) are remarkable among the anthicids for a prothoracic horn extending forward over the head. In general the horn is more prominent in *Notoxus*. It is important in the determination of various species. Its size and shape and the crest that rises from it, together with the margins, serrations, and color, are all specific characters. The horn shows some variation in individuals as well as in the sexes but on the whole seems to be fairly constant for each species. Of what use it may be to the beetles is not known. The markings of the elytra in *Notoxus* are in general less stable and are perhaps useful only in the division of species into groups. *Notoxus* may be distinguished from *Mecynotarsus* by the shorter tarsi, with the next to last segment dilated, and the densely and closely pilose upper parts.

*Notoxus* is a fairly large genus, with representatives in all parts of the world, although the greatest number seem to be from the more temperate regions. About 40 species are listed from North America north of Mexico. Blackwelder (1945) catalogues 30 species from South and Central America and the West Indies. Nineteen are from Mexico and Central America; of these 13 occur in Mexico. Twelve species are treated in this paper.

*Notoxus eximius* Champion

*Notoxus eximius* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 206, pl. 9, figs. 15, 15a.

TYPE LOCALITY: Central America (no specific location designated).

RECORDED CENTRAL AMERICAN DISTRIBUTION: Guatemala: near Guatemala City; Dueñas; Zapote. Nicaragua: Chinandega. Panama: Tolé.

NEW RECORDS FOR CENTRAL AMERICA: Honduras, La Ceiba, October 8, 1916 (F. J. Dyer), one.

Only one specimen of this very small but attractive species is in the collections of the American Museum of Natural History. It apparently is restricted to the more tropical parts of the Central American region, extending only as far north as Guatemala and south into Panama. Future collecting may, however, show that it also occurs in the ecologically similar states of Chiapas and Tabasco and adjoining regions.

*Notoxus opacus* Champion

*Notoxus opacus* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 207, pl. 9, figs. 16, 16a.

TYPE LOCALITY: Mexico: Cerro de Plumas.

RECORDED MEXICAN DISTRIBUTION: Type locality.

NEW RECORDS FOR MEXICO: Jalisco: Two miles south of Tlaquepaque, July 11, 1953 (C. and P. Vaurie, David Rockefeller Mexican expedition, 1953), one.

This is the only specimen of this apparently rare species in the collections of the American Museum of Natural History.

*Notoxus bifasciatus* (LeConte)

*Monocerus bifasciatus* LECONTE, 1847, Jour. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 1, p. 89.

TYPE LOCALITY: Western states and the upper Mississippi Valley (no specific locality designated).

RECORDED MEXICAN DISTRIBUTION: None.

NEW RECORDS FOR MEXICO: *Chihuahua*: San Jose Babicora, July 5, 1947, one. *Durango*: Palos Colorados, August 5, 1947, 8000 feet, two.

The three specimens from two widely separated localities in Mexico taken by the expedition extend the range of this species far to the south of its previously known distribution. Because it is very widely distributed throughout the eastern and central parts of Canada and the United States from New England south to Arizona, and the above Mexican records continue the range in a straight line through the states of Chihuahua into

the southern part of Durango, this insect will probably be found throughout the entire Mexican highland area. Although the species, because of its wide range through a variety of ecological environments, might be expected to show considerable variation, it is very homogeneous. The Mexican specimens, however, show some difference from material from New York, New Jersey, and Vermont. The whitish areas are somewhat larger, more diffused, and less sharply limited than in those from the northeastern part of the range.

*Notoxus talpa* LaFerté

*Notoxus talpa* LAFERTÉ, 1848, Monographie des Anthicus et genres voisins, Coléoptères Hétéromères, p. 50.

TYPE LOCALITY: California, designated by LaFerté, based on specimens collected by Piccolomini. Horn (1884) has shown that this locality is incorrect, for specimens collected by Piccolomini were not taken in California but probably in the middle western states.

RECORDED MEXICAN DISTRIBUTION: None.

NEW RECORDS FOR MEXICO: *Chihuahua*: Primavera, June 30, 1947, 5500–6000 feet, four; 12 miles northwest of Morelos, August 15, 1950 (Ray F. Smith), two.

Although widely distributed throughout the central United States from eastern Montana, Illinois, and Indiana south through Colorado into Texas, the present species seems to be nowhere common. The six specimens from two localities in Mexico a short distance over the border from Texas extend the range of this species farther to the south. It will undoubtedly be found in other places along the northern part of Mexico, particularly in the states of Chihuahua and Coahuila.

This species approaches the central Mexican species, *N. truncatipennis* Champion (1890), in having the elytra of the female more or less truncate. It is also apparently allied with the central and southern Mexican species *fraternus* Champion (1890), but differs in the truncate elytra of the female. Specimens of *N. talpa* vary somewhat in the elytral markings. The lighter forms may be confused in collections with *monodon* Fabricius, while the darker forms tend to approach *bifasciatus* LeConte.

*Notoxus ventralis* Champion

*Notoxus ventralis* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 207, pl. 9, figs. 17, 17a.

TYPE LOCALITY: Mexico (no specific location designated).

RECORDED MEXICAN DISTRIBUTION: *Guanajuato*: Guanajuato. *Vera-cruz*: Jalapa. *Distrito Federal*: Mexico City; Chapultepec.

NEW RECORDS FOR MEXICO: *Chihuahua*: Primavera, June 30, 1947, 5500–6000 feet, one; Valle de Olivos, July 20, 1947, 5500 feet, one; Catarinas, July 26, 1947, 5800 feet, one.

The three specimens from three localities, all in the southern part of the state of Chihuahua, extend the range of this species much farther to the north than previously recorded. It appears not to be abundant but is perhaps locally distributed throughout a large part of the southern and central tropical regions of Mexico as well as the more arid highland area.

*Notoxus fraternus* Champion

*Notoxus fraternus* CHAMPION, 1850, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 208.

TYPE LOCALITY: Mexico (no specific location designated).

RECORDED MEXICAN DISTRIBUTION: *Guanajuato*: Guanajuato. *Veracruz*: Jalapa.

NEW RECORDS FOR MEXICO: *Chihuahua*: Twenty miles southwest of Camargo, July 13, 1947, 4500 feet, one; 25 miles southwest of Camargo, July 14, 1947, nine; Santa Barbara, Santa Barbara district, July 18, 1947, 7500 feet, one.

The 11 specimens from three localities from near the southern part of Chihuahua extend the range of this species much farther to the north than previous records. The general pattern of distribution is the same as that of the preceding species, which appears to be closely allied with *N. ventralis*, and both are apparently closely allied with the two North American species *N. bifasciatus* and *N. talpa*.

*Notoxus monodon* (Fabricius)

*Anthicus monodon* FABRICIUS, 1801, Systema eleutheratorum, vol. 1, p. 289.

TYPE LOCALITY: "America Borealis."

RECORDED MEXICAN DISTRIBUTION: *Morelos*: Cuernavaca. *Guerrero*: Chilpancingo; Iguala; Acapulco. *Veracruz*: Jalapa; Veracruz.

Also British Honduras: Rio Hondo. Guatemala: Antigua; Zapote; Dueñas; Guatemala City. Panama: Caldera; San Lorenzo in Chiriqui. Venezuela: Cumana.

NEW RECORDS FOR MEXICO: *Chihuahua*: Delicias, July 11, 1947, 4150 feet, one; 10 miles south of Delicias, July 13, 1947, one; Catarinas, July 25, 1947, 5800 feet. *Tamaulipas*: Victoria, May 22, 1952 (M. Cazier, W. Gertsch, R. Schrammel), eight. *Morelos*: Cuernavaca, April 15, 1946 (J. and D. Pallister), three.

The range of this species over almost the entire United States and south through Mexico and Central America into northern South America



makes it one of the most widely distributed of Anthicidae. As is often the case with widely distributed species, geographical variants have developed on some of the outer fringes of the range; several of these have been designated subspecies.

*Notoxus apicalis* LeConte

*Notoxus apicalis* LECONTE, 1852, Proc. Acad. Nat. Sci. Philadelphia, vol. 6, p. 93.

TYPE LOCALITY: Michigan: Detroit.

RECORDED MEXICAN DISTRIBUTION: Recorded, but no specific locations given.

NEW RECORDS FOR MEXICO: *Chihuahua*: Samalayuca, June 24, 1947, 37; August 6, 1950 (Ray F. Smith), three; Delicias, July 11, 1947, 4150 feet, 17; 10 miles south of Delicias, July 13, 1947, three; 20 miles southwest of Camargo, July 13, 1947, one; 25 miles southwest of Camargo, July 14, 1947, nine. *Coahuila*: San Pedro de las Colonias, August 20, 1947, 3700 feet, one.

This is a wide-ranging species throughout the middle and western United States from Michigan and Kansas south into California and Texas. It has also been reported from Mexico without exact data. However, the 71 specimens taken on the expedition from six localities in the two northern states of Mexico show that the species is widely distributed south of the Texas border.

*Notoxus calcaratus* Horn

*Notoxus calcaratus* HORN, 1884, Trans. Amer. Ent. Soc., vol. 2, p. 170.

TYPE LOCALITY: Nevada, Arizona, Texas, Lower California. (No specific locality designated.)

RECORDED MEXICAN DISTRIBUTION: *Sonora*: Northern Sonora.

NEW RECORDS FOR MEXICO: *Chihuahua*: Delicias, July 11, 1947, 4150 feet, two; 6 miles northeast of Meoqui, September 2, 1950 (Ray F. Smith), one. *Sonora*: Rancho La Floresta, 8 miles east of Tastiota, July 16, 1952 (P. and C. Vaurie), one.

The new records extend the range of this species somewhat to the south and east of its previously known distribution.

*Notoxus nuperus* Horn

*Notoxus nuperus* HORN, 1884, Trans. Amer. Ent. Soc., vol. 2, p. 168.

TYPE LOCALITY: Occurs in Arizona, New Mexico, and Kansas. (No specific locality designated.)

RECORDED MEXICAN DISTRIBUTION: None.

NEW RECORDS FOR MEXICO: *Chihuahua*: Primavera, June 30, 1947,

5500–6000 feet, three; Delicias, July 11, 1947, 4150 feet, one; 25 miles southwest of Camargo, July 14, 1947, three. *Sonora*: Hermosillo, July 19, 1952 (C. and P. Vaurie), one; Navojoa, August 3, 1952 (C. and P. Vaurie), one.

Although this species has previously been recorded only from Kansas and the two southwestern states of Arizona and New Mexico, the nine specimens from the five localities listed above indicate that it undoubtedly is widely distributed throughout northern Mexico.

*Notoxus hirsutus* Champion

*Notoxus hirsutus* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 211, pl. 9, figs. 20, 20a.

TYPE LOCALITY: Mexico: Presidio de Mazatlan.

RECORDED MEXICAN DISTRIBUTION: Type locality.

NEW RECORDS FOR MEXICO: *Chihuahua*: Samalayuca, June 24, 1947, six; Primavera, June 30, 1947, 5500–6000 feet, two; Valle de Olivos, July 20, 1947, 5500 feet, one; Buena Vista, September 12, 1950 (Ray F. Smith), one.

The 10 specimens from four localities, all in the state of Chihuahua, seem to indicate that this species is somewhat localized in a rather limited area in northern Mexico.

*Notoxus cristatus* Champion

*Notoxus cristatus* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 213, pl. 9, figs. 23, 23a.

TYPE LOCALITY: Mexico (no specific locality designated).

RECORDED MEXICAN DISTRIBUTION: *Guanajuato*: Guanajuato. *Morelos*: Cuernavaca.

NEW RECORDS FOR MEXICO: *Chihuahua*: Catarinas, July 25, 1947, 5800 feet, three. *Guanajuato*: Silao, August 16, 1953 (C. and P. Vaurie, David Rockefeller Mexican expedition, 1953), one.

The description of this species was based on three specimens from two localities in central Mexico. One specimen in the American Museum material comes from near one of these localities, but the other three come from a locality much farther to the north in the state of Chihuahua.

MECYNOTARSUS LAFERTÉ

As does *Notoxus*, the species of this genus have a prothoracic horn, but they differ in having the tarsi extremely long and filiform, with the penultimate segment cylindrical. The body is small and of elegant form,

and the upper surface is devoid of erect tactile setae so characteristic of *Notoxus*.

The genus is limited in number of species, most of which occur in the Eastern Hemisphere. Four are known from the United States; one is from Central America, and one from South America. The Central American species has been found only on the Pacific coast of Guatemala, where, however, it has been taken in abundance. None are mentioned in this paper.

#### FORMICILLA LECONTE

A genus of small, polished, sparsely setose insects distinguished by the structure of the mesosternum, which is in one large unbroken plate extending to the sides of the body, the lateral edges ciliate and generally visible from above, anterior coxal cavities closed behind by the extension of the corneous base, with the median line produced behind in a slender point.

The genus has few species which are restricted to the Western Hemisphere. Five are recorded from the United States. Only three are known from Mexico and Central America.

#### *Formicilla gracilipes* (Champion)

*Formicomus gracilipes* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 220, pl. 10, fig. 1.

TYPE LOCALITY: Mexico and Guatemala (no specific location designated).

RECORDED MEXICAN DISTRIBUTION: *Veracruz*: Cordova; Veracruz. Also Guatemala: Champerico; Paso Antonio.

NEW RECORD FOR MEXICO: *Veracruz*: La Buena Ventura, July, 1909, one.

This very attractive and easily recognized species seems to be restricted to the more humid areas of southern Mexico and Guatemala. Champion records it as "found in abundance." The expedition secured none from northern Mexico. The above specimen and one from the material described by Champion in the "Biologia" are the only ones in the collections of the American Museum of Natural History.

#### DILANDIUS CASEY

A very small genus somewhat similar to *Formicilla* and separated from it largely by the characters given in the key. Two species have been taken in the United States, one in Costa Rica and one in Brazil. None is treated in this paper.

*TANARTHURUS* LECONTE

A small and very curious genus having the eleventh antennal segment bilobed; the elytra are more or less truncate at the apex and frequently are abbreviated. Next to the last tarsal segment not dilated and scarcely lobed.

Ten species are listed from the United States, all from the far west. None has been recorded from Central America. No species are treated in this paper. I am including the genus because there is a possibility that some of the species from the United States will be taken across the border, for a number occur near it.

*TOMODERUS* LAFERTÉ

A medium-sized genus, the species of which very closely resemble one another in appearance. They are robust and convex, with the prothorax deeply constricted, constriction extending across the dorsal surface. Elytra subserially punctured. Antennae stout, moniliform, strongly incrassate, femora strongly clavate.

The species of the genus are more numerous in the tropics, with most occurring in the Eastern Hemisphere. Three species are known from the United States, all east of the Rocky Mountains. Seventeen are recorded from South America, seven from Mexico and Central America, with three of these occurring in Mexico. None has been recorded from the West Indies. None is treated in this paper.

*LEPTALEUS* LAFERTÉ

A rather small genus closely related to *Anthicus*, from which it can be distinguished by the strongly gibbous anterior portion of the prothorax which is separated from the rest of the prothorax by the transverse groove behind the middle.

The genus is represented largely in the Eastern Hemisphere. Eleven species occur in South America, four in Central America, three of which extend as far north as Mexico. None has been taken from north of the border.

*Leptaleus albicinctus* (LaFerté)

*Anthicus albicinctus* LAFERTÉ, 1848, Monographie des Anthicus et genres voisins, Coléoptères Hétéromères, p. 111.

TYPE LOCALITY: Venezuela: Cumana.

RECORDED MEXICAN DISTRIBUTION: *Veracruz*: Atoyac.

Also Guatemala: Chacoj in the Polochic Valley. Nicaragua: Chontales.

Panama: Peña Blanca. Colombia. Venezuela: Cumana; Caracas. Argentina.

NEW RECORDS FOR CENTRAL AMERICA: Honduras: Tegucigalpa, February 6, 1918, November 13, 1917 (F. J. Dyer), two.

This very ant-resembling anthicid has an extremely wide distribution. It ranges from southern Mexico south through Central America, into Argentina, and across northern South America. It has not been recorded from northern Mexico and none were secured by the expedition.

### *ANTHICUS* PAYKULL

This numerically large genus has the anterior portion of the prothorax transversely convex, the posterior part cylindrical, the disc not transversely grooved behind the middle. This, the type genus of the family, contains nearly two-thirds of the species in the Anthicidae and is extremely widely distributed. Since the species are so far ranging and there are so many, there is of course considerable variation; nevertheless on the whole it is a very homogeneous group. Attempts have been made to divide the genus into a number of genera, particularly by raising the subgenera to generic rank. Casey (1895) tried this with the North American species without much success. Unfortunately the so-called subgenera have no clearly defined characters whereby they can stand as distinct genera. I do not attempt here to separate any of the groups but retain all the species under the genus *Anthicus*.

About 120 *Anthicus* are listed from North America north of Mexico. A few of these cross over into Mexico and some range farther south. Champion (1890) lists 50; many of these were described by him; Blackwelder (1945) lists from all of South and Central America and the West Indies over 160 species. Sixty-two occur in Mexico and Central America, of which 42 are recorded from Mexico.

#### *Anthicus dromedarius* LaFerté

*Anthicus dromedarius* LAFERTÉ, 1848, Monographie des Anthicus et genres voisins, Coléoptères Hétéromères, p. 114.

TYPE LOCALITY: Venezuela: Cumana.

RECORDED MEXICAN DISTRIBUTION: *Veracruz*: Huatusco; Cordova; Jalapa. *Tabasco*: Teapa.

Also Guatemala: El Tumbador; Rio Naranjo; Coatepeque; Capetillo; Zapote; San Gerónimo; San Joaquin; Chacoj; Senahu. Nicaragua: Chontales. Venezuela: Cumana.

NEW RECORD FOR MEXICO: *Veracruz*: Cordoba, May 15, 1946 (J. and D. Pallister), one.

This is a rather common and widely distributed species that ranges from southern Mexico throughout the humid tropical regions in northern South America. Although the species is rather common, the specimen recorded above is the only one in the American Museum of Natural History collections.

*Anthicus punctipennis* Champion

*Anthicus punctipennis* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 233, pl. 10, fig. 11.

TYPE LOCALITY: Mexico (no specific location designated).

RECORDED MEXICAN DISTRIBUTION: *Nuevo Leon*: Guajuco. *Guerrero*: Chilpancingo. *Guanajuato*: Guanajuato. *Veracruz*: Cordova.

Also Guatemala: Guatemala City; Zapote; Dueñas; San Gerónimo. Nicaragua: Chontales. Venezuela: Caracas.

NEW RECORD FOR CENTRAL AMERICA: Honduras: Tegucigalpa, February 3–March 19, 1918, August 6–November 12, 1918 (F. J. Dyer), 31.

No specimens of this common and very widely distributed species were taken in the four northern states of Mexico covered by the expedition. Because it has been recorded from Neuvo Leon, a neighboring state to the east of Coahuila, it can probably be found in that state and also in Durango and Zacatecas. The present known range of this species extends from northern Mexico south through Central America into northern South America. Apparently this species also has a long seasonal period, because in the large series of 31 specimens from Honduras, specimens were taken throughout February and a large part of March and from August into November.

*Anthicus asphaltinus* Champion

*Anthicus asphaltinus* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 233, pl. 10, fig. 12.

TYPE LOCALITY: Mexico; Guatemala. (No specific location designated.)

RECORDED MEXICAN DISTRIBUTION: *Guerrero*: Amula; Xucumanatlan; Chilpancingo. *Veracruz*: Cordova. *Guanajuato*: Guanajuato. Cerro de Plumas (not located).

Also Guatemala: Guatemala City; San Gerónimo.

NEW RECORD FOR MEXICO: *Veracruz*: Jalapa, May 19, 1946 (J. and D. Pallister), one.

Described by Champion from "numerous examples." Only the one specimen listed above of this apparently common species is in the American Museum collections. The species is very close to *A. punctipennis* Champion in appearance but can usually be separated by the more ovate

head, more shining surface, and less densely punctured and more sparse pubescence. The two species range over much the same region, and it is probable that they are frequently confused.

*Anthicus bactrianus* Champion

*Anthicus bactrianus* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 234, pl. 10, figs. 13, 13a.

TYPE LOCALITY: Mexico; Guatemala. (No specific location designated.)

RECORDED MEXICAN DISTRIBUTION: *Guanajuato*: Guanajuato. Cerro de Plumas (not located).

Also Guatemala: Quiche Mountains; Capetillo; Santa Rosa in Vera Paz.

NEW RECORD FOR MEXICO: *Veracruz*: Jalapa, May 20, 1946 (J. and D. Pallister), one.

This species is not common and from the few records available appears to be confined to localized areas from central Mexico south into Guatemala. The one specimen recorded above is the only one in the collections of the American Museum of Natural History. Champion described the species of nine specimens.

*Anthicus championi* Pic

*Anthicus concolor* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 236, pl. 10, fig. 15; name preoccupied.

*Anthicus championi* PIC, 1894, *Ann. Soc. Ent. Belgique*, vol. 38, p. 50.

TYPE LOCALITY: Guatemala: Rio Naranjo.

RECORDED CENTRAL AMERICAN DISTRIBUTION: Type locality.

NEW RECORDS FOR CENTRAL AMERICA: Honduras: Tegucigalpa, February 3, 1917 (F. J. Dyer), one.

Champion described this species on four female specimens captured by himself on the sandy banks of the Rio Naranjo, in the Pacific coast region of Guatemala. Because the name *concolor* was preoccupied by an Australian species, Pic renamed it after the describer.

The only specimen in the collections of the American Museum of Natural History extends the range of this small but striking species somewhat to the south. It is evidently an inhabitant of the humid tropical regions of Central America.

*Anthicus spinicollis* LaFerté

*Anthicus (Ancanthinus) spinicollis* LAFERTÉ, 1848, *Monographie des Anthicus et genres voisins, Coléoptères Hétéromères*, p. 138, pl. 27, fig. 21.

TYPE LOCALITY: "Brasilia."

RECORDED MEXICAN DISTRIBUTION: *Colima*: Colima City. *Veracruz*: Veracruz; Atoyac. *Tabasco*: Teapa; Frontera.

Also British Honduras: Beliza; Rio Hondo. Guatemala; Cahabon; San Juan in Vera Paz; Zapote. Colombia. Brazil: Amazons.

NEW RECORD FOR CENTRAL AMERICA: Honduras: Tegucigalpa, April 2, 1917 (F. J. Dyer), one.

No specimens of this widely distributed species were taken by the expedition in northern Mexico. However, it may eventually be taken in northern Mexico, as it is widespread from central and southern Mexico south through Central America into northern South America. The one specimen noted above is the only specimen in the collections of the American Museum of Natural History.

*Anthicus lecontei* Champion

*Anthicus lecontei* CHAMPION, 1890, *Biologia Centrali-Americana*, Coleoptera, vol. 4, pt. 2, p. 246, pl. 10, fig. 26.

TYPE LOCALITY: Guatemala: Rio Naranjo.

RECORDED MEXICAN DISTRIBUTION: None.

NEW RECORDS FOR MEXICO: *Chihuahua*: Catarinas, July 25, 1947, 5800 feet, three.

I am using Champion's name for these three specimens. Champion compared his specimen with one from Texas sent to him by M. Sallé, and with one from Arizona under the name *A. quadrilunatus* LeConte sent to him by Horn. He felt that his specimen was the same as the two that he had received from the United States. LeConte (1852) based his name *quadrilunatus* on a specimen from New Mexico, which Champion uses for the very excellent picture of *lecontei*. Because the name *quadrilunatus* was preoccupied by LaFerté for another Mexican species, it is necessary to use Champion's name for this one. Although Champion gives no description for *lecontei*, a comparison of his plate with the three specimens collected on the expedition convinces me that they are all of the same species. *Anthicus lecontei* can be separated from *quadrilunatus* LaFerté by the fact that the head has a very distinct occipital impression and a smooth central line, the pubescence of the upper surface is shorter and finer, the punctures are not nearly so coarse, the elytra are more flattened on the disc, and the antennae and legs are testaceous. On one of the specimens taken on the expedition the basal elytral spot is suffused, covering the entire third of the elytra, except for a narrow line along the margin and the humeral angles which are black; basal third of the prothorax rufous, apical two-thirds piceous. Apparently the species



is rare, although widely distributed over Mexico from the United States into Guatemala.

*Anthicus confinis* LeConte

*Anthicus confinis* LECONTE, 1851, Ann. Lyc. Nat. Hist. New York, vol. 5, p. 153.

TYPE LOCALITY: California: San Diego.

RECORDED MEXICAN DISTRIBUTION: *Sonora*: Northern Sonora. *Coahuila*: San Pedro. *Durango*: Villa Lerdo.

NEW RECORD FOR MEXICO: *Chihuahua*: Samalayuca, June 24, 1947, one.

Originally described from a single specimen, this species is now known to be widely distributed along the southwestern border of the United States from southern California to Louisiana and across the border throughout a large part of northern Mexico.

*Anthicus horridus* LeConte

*Anthicus horridus* LECONTE, 1851, Ann. Lyc. Nat. Hist. New York, vol. 5, p. 154.

TYPE LOCALITY: Arizona: Gila River.

RECORDED MEXICAN DISTRIBUTION: *Tamaulipas*: Nuevo Laredo.

NEW RECORD FOR MEXICO: *Chihuahua*: Catarinas, July 25, 1947, 5800 feet, three.

The present new record for Mexico is about halfway between, but a little to the south of, the previous recorded locality and the type locality. From the few distributional records available for this rather scarce species it would seem that it is confined largely to northern Mexico, perhaps here and there crossing over the border into the United States.

*Anthicus macrocephalus* Champion

*Anthicus macrocephalus* CHAMPION, 1890, Biologia Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 244, pl. 10, fig. 24.

TYPE LOCALITY: Mexico (no specific location designated).

RECORDED MEXICAN DISTRIBUTION: *Tabasco*: Teapa. *Yucatan*.

NEW RECORD FOR MEXICO: *Chihuahua*: Catarinas, July 25, 1947, one.

Champion described this species on two specimens from widely separated localities in Mexico. The single specimen of this interesting beetle taken on the expedition extends the range far to the northwest. From what information is available the species appears to be widely distributed throughout Mexico. The specimen listed above is the only one in the collections of the American Museum of Natural History.

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