

STUDIES IN NEOTROPICAL MALLOPHAGA (X)

AMBLYCERA OF THE NEW WORLD "GALLIFORMES", PART 2.

THE GENUS *AMYRSIDEA* EWING

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INTRODUCTION

There are very few records of the occurrence of Menoponidae on the Galliformes, either from the Old World or the New, and all of the were originally described under the genus *Menopon*. Excluding the species from domestic fowl, turkey and peafowl, we have but ten species from the Old World as follows: *Menopon fulvomaculatum* Denny (*Coturnix c. coturnix*); *M. perdicis* Denny (*Perdix p. perdix*); *M. latifasciatum* Piaget (*Tetrao urogalulus*); *M. subaequale* Piaget (*Euplocamus ignitus*); *M. uniseriatum* Piaget (*Phasianus praelaetus*); *M. monostoechum* Kellogg (*Phasianus nycthemerus*); *M. lagopi* Grube (*Lagopus alpinus*); *M. megalosum* Overgaard (*Perdix perdix*); *M. powelli* Bedford (*Pternistes swainsoni*); and *M. ventralis* Nitzsch (*Argusianus argus*).

But two species have been described from the New World, *Menopon cracis* Giebel (*M. macropus* Giebel) from *Crax blumenbachii* and *M. striatum* Kellogg from *Lagopus lagopus*. Osborn recorded *M. perdicis* from *Colinus virginianus*, but I doubt the correctness of this identification since there are no subsequent records of *Menopon* (*Amyrsidea*) from *Colinus*. Peters records *M. monostoechum* from *Tympanuchus cupido americanus*, but this identification is also open to doubt, his specimens probably being an undescribed species of *Amyrsidea*.

M. striatum Kellogg is not closely related to the forms found on the Cracidae. The head and thorax are similiar, but the abdominal structure and genitalia are very different.

In this paper all material from domestic fowl, turneys and guinea-fowl has been disregarded, only species from neotropical hosts being considered.

Recent critical systematic work on this group by Hopkins and Clay (not yet published) leads to the conclusion that all of the species listed above and described under the genus *Menopon* must be allocated to the genus *Amyrsidea* Ewing (genotype: *Menopon ventralis* Nit.). I am not positive that all of the species treated in this paper are congeneric with *M. ventralis* Nitzsch. Some of the old species listed above and placed under *Amyrsidea* by Hopkins and Clay also seem to be somewhat aberrant, but for the time being it seems best to place all of the Menoponidae from the Galliformes of the New World (exclusive of *Menacanthus*) under *Amyrsidea*.

The genus *Amyrsidea* is less abundant on the neotropical Galliformes than *Menacanthus*, but I believe that it will eventually be taken on all of the Cracidae, and at least on all species of *Odonotophorus*. Up to the present it has not been taken on any species of *Colinus*, although *Menacanthus* was usually present on most specimens examined. It was almost always taken on *Crax*, but never found on *Mitu*, and was less abundant on *Penelope* than *Menacanthus*. In *Ortalis* we have the reverse, where *Menacanthus* was taken from a single species and *Amyrsidea* from three. On *Chamaepetes* both proved to be equally abundant. In *Odonotophorus* I have recorded nine species and subspecies harboring *Menacanthus*, while *Amyrsidea*, of a species very different from those on the Cracidae, was taken from but three *Odonotophorus* of Colombia and Venezuela.

The study of the material from the Cracidae presented unusual difficulties. The first was the lack of material from the type host of *Menopon cracis* Giebel, so that this name could not be applied to any of the species or subspecies described. This was due to an unexpected situation found in the material from *Crax*, *Pauxi* and *Penelope*. The whole group proved to be an exceedingly one, with taxonomic characters difficult to differentiate.

All the material used in the preparation of this report (with a few exceptions noted in their proper place) was collected by the author from birds shot by him or his assistants. All drawings were prepared by the author, and the greatest care has been taken to make them correct in every way. The scale used has been 2 mm. to each space of the eye-piece micrometer with the use of a N. 10 eye-piece and a 10 mm. objective. Enlarged drawings of genitalia, antennae, etc. were made to the same scale but with the use of a 4 mm. objective. Drawings were supposed to have been reduced about one fourth in the preparation of the plates. All measurements are in millimeters.

AMYRSIDEA CRACIS (Giebel)

MENOPON CRACIS Giebel

Zeit. f. ges. Naturwiss., 1866, XXVIII, p. 391 (Host: *Crax rubrirostris*; equals *C. blumenbachii* Spix.).

Menopon macropus Giebel, Insecta Epizoa, 1874, p. 204. (Same host).

Giebel's description of this species is admittedly meager and not particularly illuminating, but there are portions which cannot be ignored. Until fresh material has been examined from the type host, however, it will not be possible to allocate the species with the various forms treated in this report from the genera *Crax* and *Pauri*. At first glance it seemed that all of these seven forms were conspecific and might well be considered merely subspecies of *cracis* Giebel. All were superficially similar. The females of all had the inner, posterior angle of the sternal aspect of pleurites I to V prolonged into a long, slender, rugose spine, had tergites I to III or IV fused medially, and had no hairs on the fused portion.

A more careful study, however, reveals an astonishing difference in the structure of the pterothorax, with this segment sexually the same in some forms and highly dimorphic in others. This results in three distinct groups into which the seven forms studied are divided.

Thus it can be readily seen that under these circumstances it is impossible to allocate Giebel's *cracis* to either of these groups without seeing specimens from the type host (*Crax blumenbachii* of S. Brazil).

A re-description of *M. cracis* Giebel was made by E. W. Stafford. (Boletín de Entomología Venezolana, Vol. II, N° 1, March, 1943) using material from *Crax nigra* of Venezuela. I have been able to study a male and female from this material used by Stafford. Of course, such a description is worthless and must be completely ignored, since material not from the type host was used. Under the existing circumstances it seems best to treat the material before me quite independently, merely listing Giebel's species under the name *cracis* and giving to the other forms new specific or subspecific names. When specimens of *Amyrsidea* from *Crax blumenbachii* can be studied, however, there is a strong probability that they will prove to be conspecific with one of the three species described below. In this case Giebel's name, instead of the name here proposed, must be used for the group into which it falls. There is no point in repeating here Giebel's meager description of the species *cracis* which may easily be consulted by anyone interested in doing so. He gives but one character which might be used to determine into which group it could be placed. That character is: "*metathorace trapezoideo*". This could refer only to a pterothorax with more or less straight, divergent sides and more or less transverse posterior margin. The type being a female, it could only be referred to Section I. Without actual examination of material from the type host, however, I hesitate to allocate *cracis* to any of the species herewith proposed.

The following diagnosis of the group contains only those characters which are common to all of the seven species and subspecies proposed below regardless of the "section" into which they have

been placed: Size medium (female 1.80 to 2.00, male somewhat smaller) with abundant, though not extra long chaetotaxy; patches of rather coarse setae on third femur and on each side of abdominal sternites IV to VI with usually a few scattered setae on III and VII but not always on III; head roughly triangular, much wider than long, flatly rounded to nearly circular frons, rounded temples and concave occipital margin; pharyngeal sclerite and gland present, the former well developed, the latter small and lying under the anterior prongs of the sclerite; prothorax short and wide, sides flattened and posterior margin flatly convex, four long hairs on each side; pterothorax longer than prothorax, sides straight and strongly divergent (as a rule), posterior portion differing as given under the three "sections".

The chitinous bars which support the coxal attachments are complicated and vary considerably in the different forms. The anterior coxae are always much the largest. They are as long, or longer, than the length of the prothorax, while the second and third are much smaller; all three pairs show some variation in the different species and subspecies. The abdomen is oval, of medium size, usually with well developed pleurites; the greater portion of which lies on the ventral aspect of the abdomen (in mounted insect); the dorsal portion is narrow and as a rule deeply pigmented.

The most outstanding character of this group of species is the unusual structure in the female of pleurites I to IV (sometimes V). They have the inner, sternal posterior portion produced into a long, slender, rugose or spiculate spine (called "sac" by Stafford). Pleurites VI to VIII are normal. The tergites seem to be continuous across the abdomen, the lateral ends often with deeply pigmented incassations which usually lie over the ventral portion of the pleurites and thus appear to belong to them. Segment IX in the female is large, wide and rounded posteriorly with complicated dorsal and ventral fringes of setae around the anal opening. Legs are strongly developed; the rear pair, when extended straight backward, reaching in some cases to the end of the abdomen but usually only to the end of segment VIII. The first pair of femora are always deeply channeled, as are often the second and sometimes the distal portion of the third. The second and third femora and all of the tibiae have well developed, strongly chitinized and pigmented marginal bands. Tarsi are long and slender with very short and slender claws.

Male genital armature is not complicated. It consists of a very short, wide basal plate, long, slender, faintly pigmented paramers, and slender endomeral rods of varying length lying over (or possibly fused with) the endomeral sac which fills the space between the paramers. Lying normally within the basal plate is a free body which I have called the "penis" and which is attached to the end of a transparent,

often more or less spiculated sac. During copulation this whole sac, together with the "free penis", is extruded and in mounted specimens is often found outside the body. The penis, together with the other component parts of the genitalia, presents a good, at least subspecific, taxonomic character.

The material here presented is from seven hosts and all falls into the so-called "cracis" group. These seven forms are divided into three distinct sections, all possessing well developed spines on pleurites I to V in the female, usually small spines on pleurites II to V in the male, and with tergites I to III (or IV) in the female fused medially and devoid of hairs on fused portion. They may be briefly described as follows:

SECTION I

The male has dorsum of pterothorax transverse posteriorly with seven hairs on each side (including angle) and tergite I with row of strong hairs along posterior margin. The female has dorsum of pterothorax flatly to strongly convex but *not* overlapping tergite I and has seven hairs on each side. This section includes *A. s. simplex*, *A. simplex rubra*, and *A. simplex pauxis*.

SECTION II

The male has dorsum of pterothorax almost transverse with seven hairs on each side and tergite I normal with fringe of strong hairs along the posterior margin. The female has dorsum of pterothorax arched far backward over abdomen, reaching to the posterior margin of tergite II and ending in a rounded point. There are two long, strong hairs on each side of the posterior margin. This section includes only *A. parvispina*.

SECTION III

The male has dorsum of pterothorax arched backward to posterior margin of tergite I, covering that entire segment except for the pleurites at each side and with *one* long, strong hair on each side medially. Tergite I is *without* hairs along the posterior margin. The female has dorsum of pterothorax flatly rounded, not overlying tergite I, and with five (?) hairs on each side including those at angle. This section includes the following forms: *A. s. spinigaster* (male and female), *A. spinigaster alberti* (only male known), and *A. spinigaster daubentoni* (only female known).

Unfortunately no females were taken of *alberti* and no males of *daubentoni*, but the single male of *alberti* falls into section III and the female of *daubentoni* also agrees with characters given for that section. It is therefore probable that the missing sexes will also fall into N° III.

SECTION I

AMYRSIDEA SIMPLEX SIMPLEX new species.

Figs. 1 to 5^a

Types, male and female adults, from *Crax annulata* Todd, were collected by the author at La Cueva

Dept. Magdalena, Colombia, April 13, 1945 (in U. S. Nat. Mus.).



Fig. 1.
Amyrsidea simplex simplex ♂

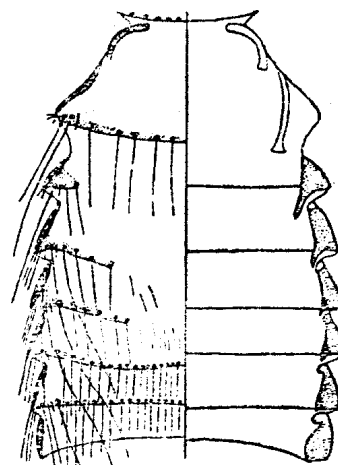


Fig. 2.
Amyrsidea simplex simplex ♀
Pterothorax and segments I to VI of abdomen.

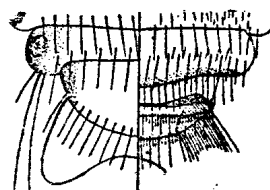


Fig. 3.
Amyrsidea simplex simplex
Tip of ♀ abdomen.

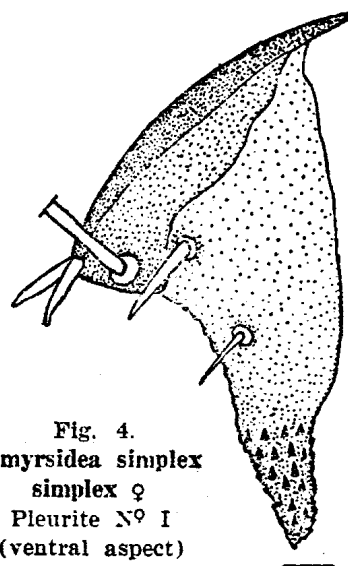


Fig. 4.
Amyrsidea simplex simplex ♀
Pleurite N° I (ventral aspect)

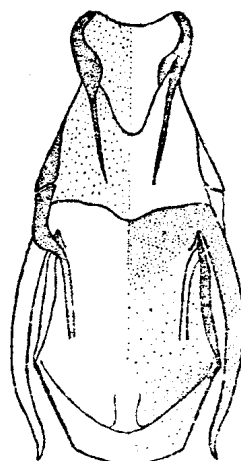


Fig. 5.
Amyrsidea simplex simplex ♂ genitalia.

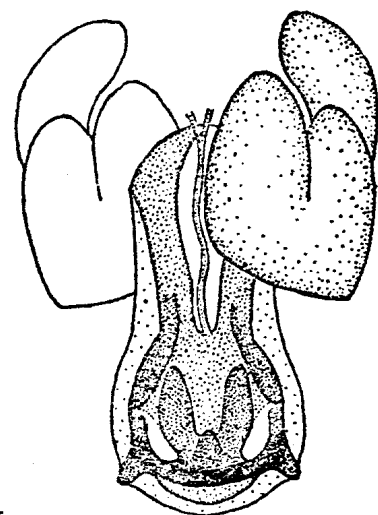


Fig. 5-a.
Amyrsidea simplex simplex ♀
Pharyngeal sclerite and gland.

Diagnosis. — In addition to the characters given under the diagnosis of the whole group and under Section I, the species may be separated from *A. s. rubra* and *A. s. pauxis* by the following:

Male. — There are certain differences in measurements and proportions of the head, thorax and genitalia between the three races. (See table of measurements). The front is more flatly convex than both *rubra* and *paucis* with marginal swelling at base of palpi as in *paucis* but absent in *rubra*; the prothorax is shorter and wider than in both *paucis* and *rubra*, those two being subequal; the pterothorax is slightly larger than in *paucis* but smaller than in *rubra*. The pleurites are well defined and pigmented dorsally but narrow and faintly colored ventrally; number I pleurite is small and triangular, II to IV are narrower anteriorly than posteriorly, but V to VIII are more or less quadrate; there are well developed pleural apodemes on IV to VIII, increasing in size posteriorly; there are small spines on II to IV; the ends of the tergites have incrassations which overlie the ventral portion of the pleurites on III to VIII. The distinguishing characters of the genitalia may be seen from the figure.

Female. — The abdominal pleurites are of medium width, much wider than in *rubra*, some narrower than in sternal portion of *paucis*. The spines on I to IV are well developed and very rugose, but that of V is small and rounded. In *rubra* and *paucis* number V spine is only slightly smaller than IV. Tergites I to III are completely fused except at sides and devoid of hairs on fused area except for a cluster of medium sized hairs in median portion of posterior margin of III. The long, marginal hairs of these three segments are present on each side as far inward as the dividing suture is visible, but on number I they are reduced to a spine and two hairs. (Table of measurements follows *A. s. paucis*).

AMYRSIDEA SIMPLEX RUBRA new subspecies.

Figs. 6 to 9.

Types, male and female adults, from *Crao r. rubra* Linné, were collected at Camp Pital, Chiriquí, Panamá. (In collection of G. H. E. Hopkins).

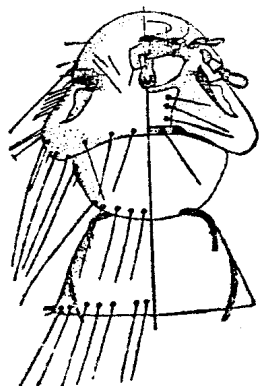


Fig. 6.
Amyrsidea simplex rubra ♂
Head and thorax.

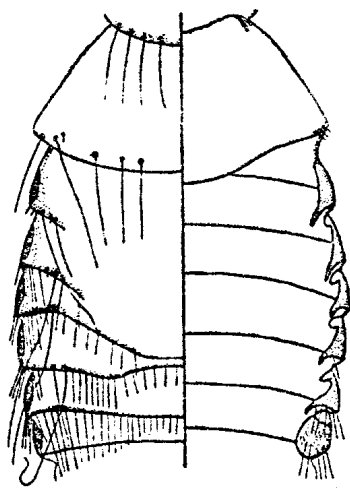


Fig. 7.
Amyrsidea simplex rubra ♀
Pterothorax and segments
I to VI of abdomen.

Diagnosis. — Represented by a single male and female, the types, which unfortunately, are not in the best of condition. They have lost many of their hairs and are either not fully chitinized or are over-cleared.

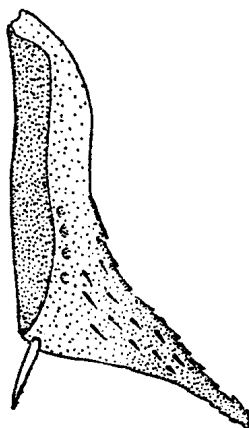


Fig. 8.
Amyrsidea simplex paucis ♀
Pleurite No. 1 (ventral aspect).

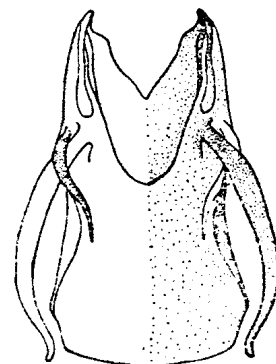


Fig. 9.
Amyrsidea simplex rubra
♂ genitalia.

Male. — The shape of the head is near to *simplex* but differs in having the wide frons uniformly circular from the ocular slit forward and by having more slender temples. The prothoracic attachment to the head also differs, being at the very edge of the occiput instead of well forward as in *simplex*.

The prothorax is longer and narrower than in *simplex* or *paucis*, while the pterothorax is also proportionately long and narrow, shaped much as in *simplex* but much longer and a trifle wider. The abdominal pleurites are wider in the male than in the female with no trace of spine on number I but a very short, rather pointed spine on II to V. The dorsal portion of the pleurites is unusually wide, deeply pigmented, and has a well-developed apodeme on III to VIII. Tergal incrassations are present and probably deeply pigmented on normal, adult specimens. The differences in genitalia may be seen from the figure.

Female. — The female is considerably larger than the male, especially the head and thorax. The latter has posterior dorsal margin much more strongly convex than in the male and has only five hairs on each side (including angle). The hairs are set nearer to the edge of the segment. The abdominal pleurites are extremely narrow, both dorsally and ventrally; the spine on I is long and rugose, those on II to IV are smaller and subequal, and that on V is smaller but well-defined. The whole pleurite is much wider than I to IV. Tergites I to IV are completely fused, while the sutures between IV and V and between V and VI are very faint in median portion and the marginal hairs along this area are very short; there are two long hairs (inside spines) on I to IV, on II one short hair, on III 7, and on IV 9 short hairs on each side of the segment.

AMYRSIDEA SIMPLEX PAUCIS new subspecies.

Figs. 10 to 13.

Types, male and female adults, from *Pauri pauri gillairdi* Wetmore & Phelps, were collected by the author at Tierra Nueva (Marimonda), Sierra Perijá, Colombia, July 21, 1941 (in collection of U. S. National Museum).

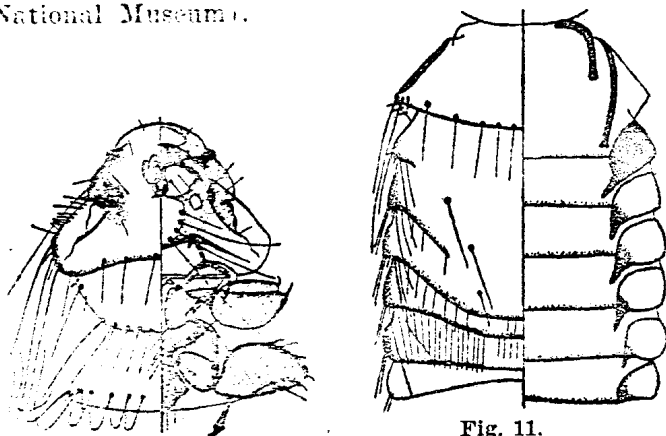


Fig. 10. *Amyrsidea simplex paucis* ♂ Head and thorax.
Fig. 11. *Amyrsidea simplex paucis* ♀ Pterothorax and abdominal segments I to VI

Diagnosis. — Male: The front of the head (between base of palpi) is much narrower than in *simplex* or *rubra*, more circular, and has prominent swellings at palpi; the temples are narrow like *rubra*. The abdominal pleurites are *quadrate*, as wide, or wider than, long (ventral aspect) with the exception of number I, which has very small,

pointed spines on II to IV. (See figure for differences in genital armature).

Female. — The outstanding characters of the female of this race are the very wide and deeply pigmented ventral pleurites and greatly developed, strongly rugose spines on I to V. Number I is very large, and size decreases progressively to V. Tergites I to IV are fused as in *rubra* with more or

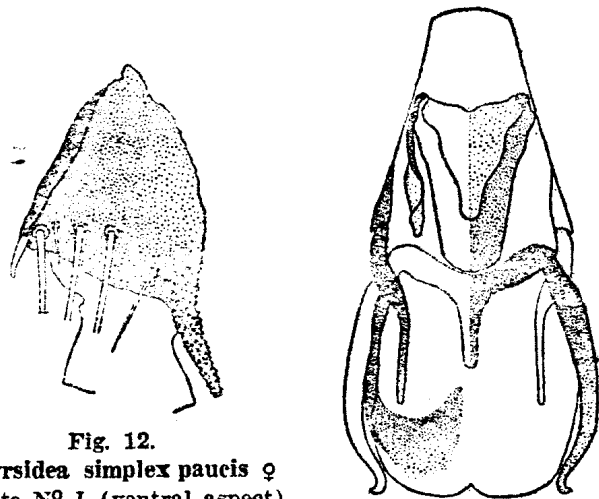


Fig. 12. *Amyrsidea simplex paucis* ♀ Pleurite No. 1 (ventral aspect).
Fig. 13. *Amyrsidea simplex paucis* ♂ genitalia.

less similar chaetotaxy. The posterior margin of the pterothorax is also more strongly convex in the female than in the male.

TABLE OF MEASUREMENTS

Segment	A. simplex simplex				A. simplex rubra				A. simplex paucis				
	male		female		male		female		male		female		
	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.84	....	2.05	....	1.77	....	2.06	....	1.76	....	2.01	....
Head	frons424741246740245
	temples	.423	.61	.456	.684	.402	.588	.445	.695	.402	.60	.445	.685
	occiput	.3740337393640
Prothorax	.205	.44	.228	.50	.228	.415	.28	.50	.228	.415	.265	.50	
Pterothorax	.260	.53	.335	.727	.293	.553	.404	.80	.24	.51	.326	.74	
Abdomen	1.05	.727	1.21	.89	1.07	.655	1.19	.91	.93	.72	1.62	.91	
Basal plate	.163	.12			.17	.13			.16	.12			
Paramers	.155	....			.15	....			.16	....		
Endomerale sac	.15	.14			.14	.12			.12	.14			

SECTION II

AMYRSIDEA PARVISPINA new species.

Figs. 14 to 17.

Types, male and female adults, from *Pauri pauri unicornis* Bond & de Schauensee, were collected by the author at Palmar, Departamento Cochabamba, Bolivia, July 20, 1937 (in collection of author).

Diagnosis. — Male: The head is unusually narrow at the temples with front circular and strong swellings at base of palpi; prothorax is attached far forward under the head and is narrow as in *rubra*; pterothorax is narrow posteriorly as in *paucis*, slightly convex on posterior margin which is set with very strong, long hairs extending beyond posterior margin of abdominal segment II. Pleurites are quadrate, with the exception of I, which

is triangular, and as wide or wider than long. They have extremely small, blunt, almost obsolete spines on III to V. Pleural apodemes and tergal incassations are well developed and sharply defined on segments III to VIII. See figure for genital armature.

Female. — The female is recognized at a glance by the unusual shape of the pterothorax (see diagnosis of Section II) and also by the small, very rugose spines on pleurites I to IV. The pleurites themselves are ventrally quadrate, even number I, with IV to VII wider than long. Apodemes and tergal incassations are present on IV to VIII. Tergite I is arched far backward and numbers II to V are fused medially. There are no hairs along the lateral portions of I and II except at the angles.

There are seven on III and twelve on IV, while V has the entire posterior margin set with normal hairs of uniform size. (Table of measurements is after *A. spinigaster daubentoni*).

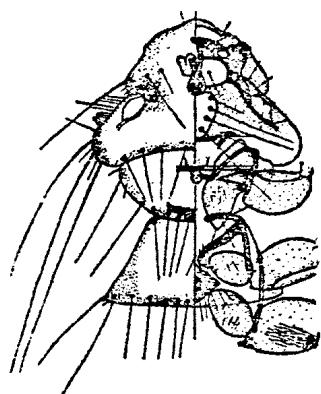


Fig. 14.
Amyrsidea parvispina
Head and thorax ♂

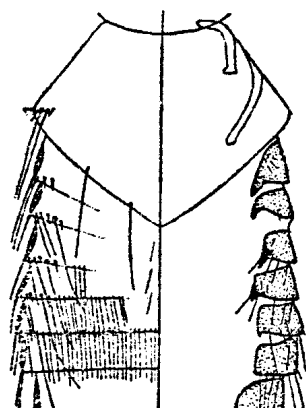


Fig. 15.
Amyrsidea parvispina ♀
Pterothorax and segments I
to VII of abdomen.
(Center of pterothorax concealed
by food matter, 2nd.
and 3rd. coxae and metasternum
hidden).

and III. There are well-developed, but small, spines on II to IV. (Number I is triangular). There are well-developed apodemes and tergal incassations on II to VIII. The dorsal portion of the pleurites is narrow but deeply pigmented in all segments from I to VIII. See the figure for the genitalia.

Female. — The head is of the same size as *simplex* and *rubra* but has the margin bearing ocular fringe sinuate instead of straight; the head is larger than in *daubentoni* and *parvispina*. The pterothorax is wider than in *parvispina* and *daubentoni* and narrower than in *rubra*. Abdominal pleurites I to IV are *very strongly* developed with very long, spiculate spines, number I much the largest, each succeeding spine decreasing slightly in size, and with a very small, rounded spine on the rounded V. The only other forms in this group which have spines on pleurites I to IV approaching this one in size are *pauxis* and *daubentoni*. In *daubentoni*, however, they decrease in size more rapidly from I to IV, while in *pauxis* the pleurites are sub-quadrate in shape.

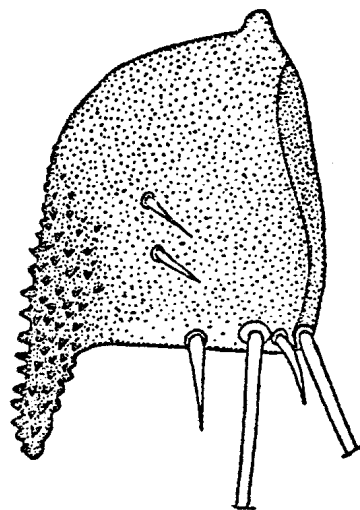


Fig. 16.
Amyrsidea parvispina ♀
Pleurite N° I right side.

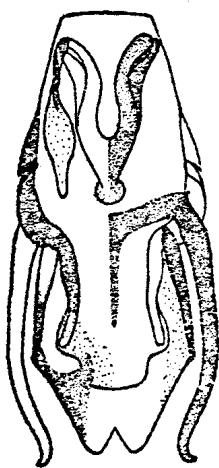


Fig. 17.
Amyrsidea parvispina
♂ genitalia.

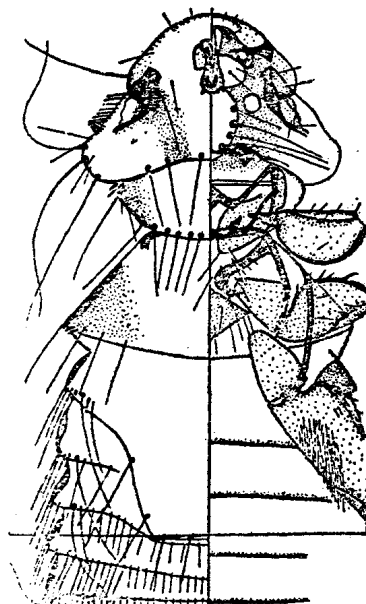


Fig. 18.
Amyrsidea spinigaster
spinigaster ♀

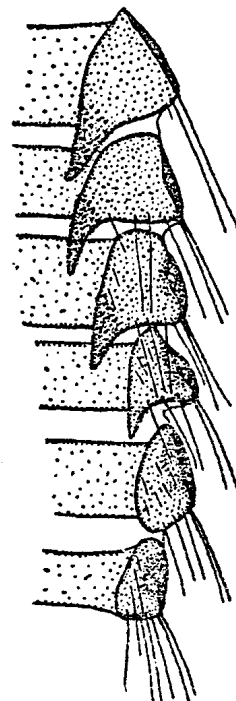


Fig. 19.
Amyrsidea spinigaster
spinigaster ♀
Pleurites and tergites
I to VI.

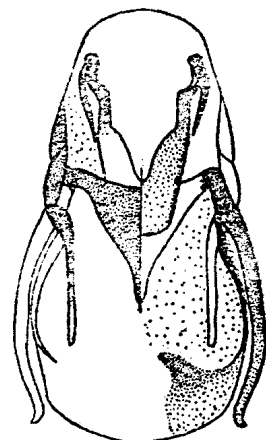


Fig. 20.
Amyrsidea spinigaster
spinigaster
♂ genitalia.

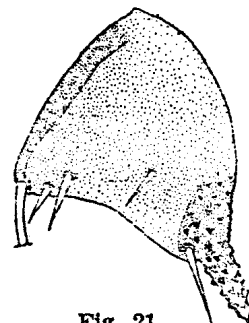


Fig. 21.
Amyrsidea spinigaster
spinigaster
Pleurite N° I of ♀

SECTION III

AMYRSIDEA SPINIGASTER SPINIGASTER new species.

Figs. 18 to 21.

Types, male and female adults, from *Crax nigra* Linné, were collected by Pablo Anduze at San Felipe, E. Yaracuy, Venezuela, May 16, 1938 (in Instituto de Higiene, Caracas, Venezuela).

Menopon cracis Giebel, Stafford, Boletín de Entomología Venezolana, Vol. II, N° 1, March 1943, p. 36.

Diagnosis. — Male: The shape and size of the head is similar to, but with thinner temples than that of *simplex*; the ocular slit, plainly visible in all other forms of the "cracis" group, is completely covered by the eye; the pterothorax is longer and wider. The pleural plates are rather wide (about the same width as in the female) and rather quadrate. The anterior end is flatly convex and somewhat narrower than the posterior end in II

NOTE. — In Stafford's description and figure of this species he shows a structure of the abdominal

sclerites of female at variance with my own findings. Tergites I to IV are fused (as described elsewhere) with no hairs at their sides *inside the pleural* spines on I to III, but IV has posterior margin with full complement of hairs, though shorter than on V. I find no overlapping of VI over VII as shown by him. Stafford also says for males: "Sac-like appendages on pleura I to IV". There is no spine on pleurite I. Tergites III and IV are arched backward medially but not to the extent of those sclerites in *pauxis*. In the single female specimen seen by me it is not clear whether or not tergites I and II are arched, but all four, as stated above, are certainly fused and without hairs.

A single pair of this species remains in the Anduze collection, which I have examined. While in good condition, they were never properly cleared, and there is a large patch of food matter in the female which conceals to some extent the median portion of the pterothorax and abdominal segments I and II. Enough is visible, however, to verify the above statements.

AMYRSIDEA SPINIGASTER ALBERTI new subspecies.

Figs. 22 to 24.

Type, male adult, from *Crax alberto alberto* Fraser, was collected by the author at La Tigrera (near Santa Marta), Magdalena, Colombia, May 11, 1913. (in collection of author).

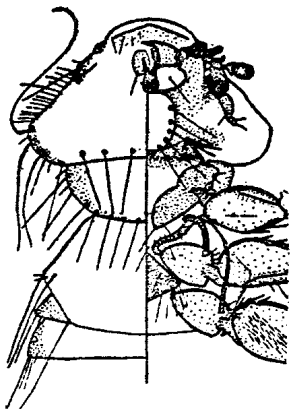


Fig. 22.
Amyrsidea spinigaster alberti ♂
Head and thorax.

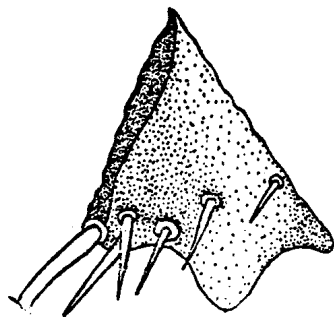


Fig. 23.
Amyrsidea spinigaster alberti ♂
Pleurite N° I (ventral aspect)



Fig. 24.
Amyrsidea spinigaster alberti ♂
genitalia.

Diagnosis. — This subspecies is represented by a single male, the type. The head is shorter than the male of *simplex* and *spinigaster*, about the same length as *rubra*, and longer than *pauxis*; the width at both temples and frons is practically equal to that of all the males of the "cracis" group except *pauxis* and *rubra* with the temples much wider

than either and the frons wider than *pauxis*. The shape of the head is peculiar (see fig.) and distinctive. It has a very narrow, flattened front, straight sides (slightly sinuate) and shallow occipital concavity. There is a peculiar abnormality in the chaetotaxy of the head. There are five hairs on the right side of the occipital clear area and the normal four on the left. The pterothorax is short and very wide posteriorly; the abdomen is small with wide and somewhat quadrate pleurites with a short, blunt spine on II to IV; the tergal incrassations are rather well developed and overlies the pleurites; the pleural apodemes are also well developed. The genitalia (see fig.) present distinguishing features in shape of paramers and endomera, both rods and sac, while the penis is also distinctive. The basal plate is covered by fecal matter.

AMYRSIDEA SPINIGASTER DAUBENTONI new subspecies.

Figs. 25 to 27.

Type, female adult, from *Crax alberti daubentoni* G. R. Gray, was collected by the author at El Hacha, Venezuela, Jan. 6, 1910 (in collection of author).



Fig. 25.
Amyrsidea spinigaster daubentoni ♀

Diagnosis. — This subspecies is represented by two adult females, including the type. It is easily distinguished from all the other known females of the group by the shape of the head. It is shorter than *simplex* and *pauxis* and narrower both at frons and temples than all the others except *pauxis*; the frons is very flatly rounded, with the temples very thick and the distance from the ocular slit to the front of the head unusually

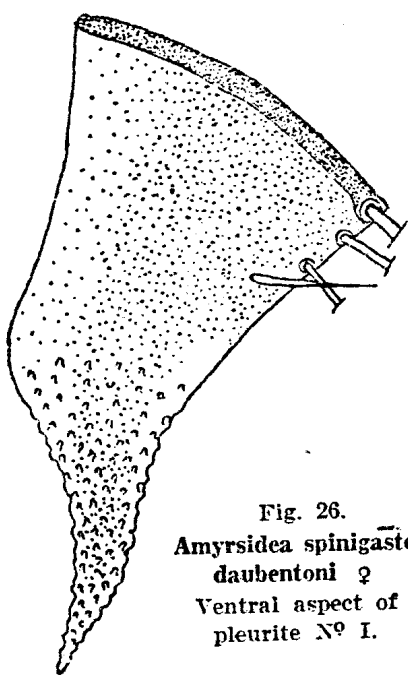


Fig. 26.
Amyrsidea spinigaster
daubentoni ♀
Ventral aspect of
pleurite No. I.

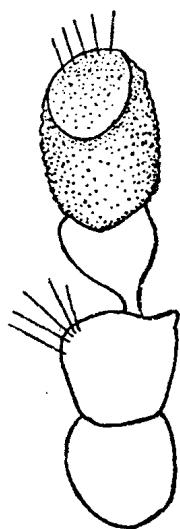


Fig. 27.
Amyrsidea spinigaster
daubentoni ♀
Antenna.

is narrower than all others except *pauris*. The abdominal pleurites are wide with a strongly developed spine on I to IV and a small one on V. The tergal incrassations are obsolete, merely showing a trace on III to VI; pleural apodemes are present. Tergites I to III are fused into a solid plate and devoid of hairs, III is arched backward over IV and the anterior third of V.

The two females comprising this form are not in the best of condition, having lost many hairs in the process of demounting and clearing an old slide. There may, therefore, be some slight errors shown in the abdominal chaetotaxy. In the figure the thick fringe of setae shown as being on the dorsal side of segment IX is in reality on the sternal surface.

TABLE OF MEASUREMENTS

Segment	<i>A. s. spinigaster</i>				<i>A. parvispina</i>				<i>A. spinigaster alberti</i>		<i>A. spinigaster daubentoni</i>		
	male		female		male		female		male		female		
	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.84	....	2.12	....	1.76	....	1.92	....	1.53	....	1.82	....
Head {	frons	....	.423	....	.46	....	.392	....	.435	....	.412	....
	temples	.423	.62	.445	.70	.40	.563	.45	.65	.39	.662	.42	.673
	occiput	.37539136038735837
Prothorax	.217	.445	.239	.51	.217	.415	.235	.480	.205	.456	.228	.49	
Pterothorax	.36	.565	.38	.77	.282	.51	.586	.705	.326	.565	.347	.70	
Abdomen	1.08	.716	1.21	.89	1.00	.65	1.12	.704	.91	.705	1.06	.846	
Basal plate	.143	.117			.175	.115			....	.12		
Paramers	.165	....			.163	....			.163	....		
Endemoral sac	.135	.143			.143	.13			.13	.13			

AMYRSIDEA SEMICRACIS new species.

This species is divided into numerous closely related, though clearly distinguishable, subspecies. The species may be diagnosed as follows: Head and thorax are similar to those of *simplex*, *parvispina*, and *spinigaster* in all specific characters, merely differing in size, shape, and proportion to a degree of only subspecific importance. The pterothorax is short, has widely flaring sides, and is either straight or slightly concave; the posterior margin is flatly convex and equal in the sexes and has the usual complement of strong hairs.

Abdominal tergites I to VII are transverse, have stout hairs along the posterior margin, and are equal in the sexes. There are patches of rather dense, finely textured setae on the third femur and sternites (as in *simplex* and *spinigaster*) except that the hairs are coarser along the inner side of sternal patches and the posterior edge of femoral patches. Hairs along posterior margin of sternites are shorter and of much finer texture than those of the tergites.

Pleurites, as far as known, are more or less of the same size and shape in the two sexes, ranging from narrow to semi-quadrate but *always* bearing

smallish but well-developed spine on numbers II to VI in both sexes but *never* with a large spine on number I in the female. Number II is usually the largest, each decreasing slightly in size posteriorly, number VI sometimes almost obsolete, while sometimes all five are sub-equal. Tergites always have ends rather deeply pigmented and have strongly developed and deeply pigmented incrassations. Pleural apodemes are present, ranging from very large (see *guttata*) to small.

Male genital armature is of the same type as *simplex* and *spinigaster* but differs in detail. Briefly the *semicracis* group may be distinguished specifically from the *simplex* and *spinigaster* groups (also *parvispina*) by the absence of sexually dimorphic structure of pterothorax and tergites I to IV, by entire absence of a large spine (or spine of any sort) on pleurite I of female, and by smallish spines of nearly equal size on pleurites II to VI in both sexes.

The species has thus far been taken from five species and subspecies of *Penelope*, from *Aburria aburri* and from three species of *Chamaepetes*. The related forms found on *Ortalis* (also of the *Cracidae*) are very close to *semicracis* but seem to form a compact group differing sufficiently to merit

specific rank. They will, therefore, be treated on a subsequent page.

AMYRSIDEA SEMICRACIS SEMICRACIS new species.

Figs. 28 to 30.

Types, male and female adults, from *Penelope argyrotis colombiana* Todd, were collected by the author at Los Gorros, Department Magdalena, Colombia, April 27, 1945 (in U. S. National Museum).

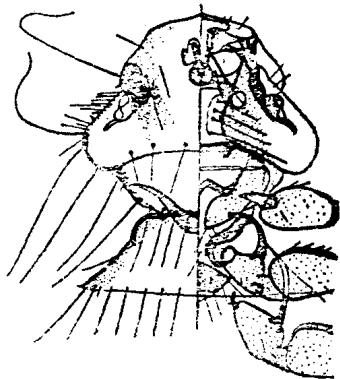


Fig. 28.
Amyrsidea semicracis
semicracis ♀
Head and thorax.

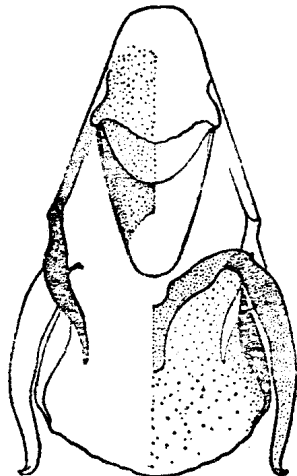


Fig. 29.
Amyrsidea semicracis
semicracis
♂ genitalia.

Diagnosis. — Female: Head has narrow temples with straight anterior margin (bearing ocular fringe); the anterior portion of the head is wide, especially the frons which is flattened slightly and pointed medially. The thorax is normal with the mesothoracic region well developed and the sides slightly protruding. The legs have the usual type of coxae, femora, and tibiae; the distal end of the first femur and the anterior sides of the second and third, as well as both margins of *all tibiae*, are *heavily banded*. The pleurites are not typical of most of the other races of *semicracis*. They are very narrow ventrally in both sexes with anterior end no wider than the dorsal, pigmented portion. Apodemes are present on III to VIII, small on III, but increasing in size progressively to VIII. The spines on II to VI are slender, curving, pointed, and practically subequal; there is one hair on the ventral margin of pleurite III, two on IV, three on V, and four on VI; ends of the tergites have well developed incassations clearly outlined and not overlying pleurites except slightly in I and II and the apodemes in III to VI; segment IX does not differ materially from that of *simplex* and *spinigaster*.

Male. — The male differs from the female only in smaller size, slightly different proportions of pterothorax and abdomen, somewhat wider pleurites and the structure and chaetotaxy of apical segment of abdomen. The latter is also similar to *simplex* and *spinigaster*. The pleurites are but little wider at the posterior end but *considerably* wider in the anterior portion. The spines are equal

in size to those of the female. The genitalia differ from all the other known males of the races of *semicracis* in the shape of the basal plate, very short, thickened paramers, and in the shape of the endomeral rods (see fig.).

This species is represented by four males and four females including the types.

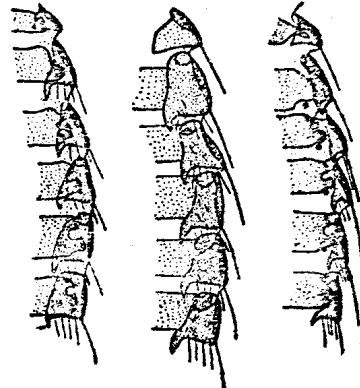


Fig. 31. — *Amyrsidea semicracis purpurascens* ♀
Pleurites and tergites I to VI.

Fig. 38. — *Amyrsidea semicracis jacquagu*
Pleurites and tergites I to VI.

Fig. 30. — *Amyrsidea semicracis semicracis* ♀
Pleurites and tergites I to VI.

AMYRSIDEA SEMICRACIS PERIJANA new subspecies.

Fig. 31.

Types, male and female adults, from *Penelope argyrotis albicauda*, were collected by the author at Tierra Nueva (Marimundo), Sierra Perijá, Colombia, July 3, 1941 (in U. S. National Museum).

Diagnosis. — This race, while close to the nominate form, *semicracis*, differs from that race as follows: The head is of the same length and width at frons but slightly wider at the temples; frons is more pointed, and each side is flatly convex, almost to the slight median point, instead of having a marked concavity on each side of the center.

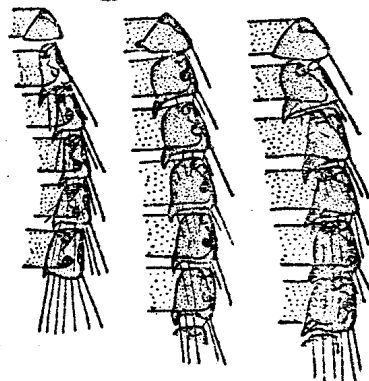


Fig. 35. — *Amyrsidea semicracis brunescens*
Pleurites and tergites I to VI ♀

Fig. 31. — *Amyrsidea semicracis purpurascens*
Pleurites and tergites I to VI ♀

Fig. 41. — *Amyrsidea semicracis aburris*
Pleurites and tergites I to VI ♀

The outstanding differences, however, are in the shape of the pleurites. Especially the anterior ends are much wider in both sexes, having a shape approaching, but not quite the same, as *purpurascens* (see fig.). The tergal incassations are dif-

ferent in shape, the posterior one is quite *round* on all segments from II to VIII (as shown in number VI in figure of *semicracis*) while the anterior ones are also more rounded, extend further laterally, and are partially covered by the large apodemes. The spines are of about the same size and shape as in *semicracis*.

The male genitalia differ but little. The paramers are short and thickened, the endomeral rods similiar, but the penis slightly longer and very much narrower at the basal end, being but .05 against .077 in *semicracis*. The lateral flaps (which attach it to sac) are not hair-like, as in *semicracis*, but *wide* and longer. They are twice as wide as those of *purpurascens* and have wide, rounded ends. (See figure of *purpurascens*).

The race is represented by two males and one female, including the types.

AMYRSIDEA SEMICRACIS PURPURACENS new subspecies.

Figs. 32 to 34.

Types, male and female adults, from *Penelope p. purpurascens* Wagler, were collected by the author at Volcano San Martín, Dept. Veracruz, Mexico, April 17, 1940 (in U. S. National Museum).

Diagnosis. — The head is very differently shaped from that of *semicracis* or any of the other known races of the species, the temples are more uniformly rounded with the anterior margin *decidedly convex*; the front of the head is sharply constricted anteriorly to swellings at the base of the palpi; frons is pointed with convex sides; there is a wide, deeply pigmented band along the lateral margin of the head from the bucal cavity to the ocular slit (a unique character). The mesothorax is slightly larger with sides extending considerably beyond the line of the metathorax.

The pleurites are a distinguishing character (see fig.). They are much wider than in *semicracis* and also have somewhat larger spines. Number II is very narrow anteriorly, scarcely wider than the dorsal portion. They increase rapidly in width from III to VI, the latter being *quadrate*. II has the

inner side concave, III almost straight, IV very flatly convex, and V rounded. The ends of the tergites and their incrassations are also of decidedly different shape (see fig.); the apodemes are smaller than in *semicracis* and are apparently present only on IV and V. Pleurites II to IV have four hairs on the posterior margin; V and VI have five hairs.



Fig. 32.
Amyrsidea semicracis purpurascens ♀
Head and thorax.

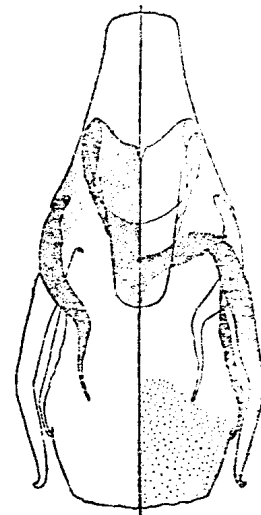


Fig. 33.
Amyrsidea semicracis purpurascens
♂ genitalia.

Male. — The head is slightly smaller than in the female but of the same proportions; the pterothorax is much narrower and shorter with the mesothorax not extending beyond the line of the metathorax. The abdominal pleurites are almost as wide as in the female but of *very* different shape. They are quadrate, slightly longer than wide, anterior end convex and slightly narrower than posterior end, and inner sides nearly straight to spine which arches outward from the pleurite. The apodemes are more prominent and are present on III to VIII. The tergal incrassations are more sharply defined, more strongly pigmented, and more rounded in shape. The genitalia differ considerably. They have longer, slenderer paramers and narrower basal plate with concave sides, endomeral rods are longer and more slender apically, sac is narrower and has narrower lateral pigmented band; penis is narrower and longer with longer and wider flaps. (See fig.).

TABLE OF MEASUREMENTS

Segment	<i>A. semicracis semicracis</i>				<i>A. semicracis perijanus</i>				<i>A. semicracis purpurascens</i>				
	male		female		male		female		male		female		
	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.78	....	1.97	....	1.60	....	1.99	....	1.75	....	1.97	....
Head {	frons4234453144584143
	temples	.412	.597	.445	.445	.41	.595	.423	.662	.41	.59	.456	.63
	occiput	.37383473936539
Prothorax	.195	.435	.195	.47	.195	.423	.217	.445	.195	.40	.217	.445	
Pterothorax	.23	.57	.23	.65	.205	.535	.25	.586	.215	.525	.22	.618	
Abdomen	1.08	.75	1.24	.87	.91	.716	1.25	.825	1.05	.74	1.26	.78	
Basal plate	.175	.13			.152	.137			.174	.13			
Paramers	.158	....			.14	....			.16	....		
Endomeral sac	.13	.109			....	.137			.13	.137		

Fig. 35.

Types, male and female adults, from *Penelope purpurascens brunnescens* Hellmayr & Conover, were collected by the author at La Cueva (near Distracción), Dept. Magdalena, Colombia, April 2, 1945 (in collection of U. S. National Museum).

Diagnosis. — Female: The head differs strongly in shape from *semicracis*, *perijana*, and *purpurascens*, being closer to that of *jacquáçu*. The temples are round as in *purpurascens* and rather thick but have less convex, nearly straight, anterior margin. The whole front of the head from the ocular slit forward is almost circular with only a slight indication of swelling at palpi. The abdominal pleurites are wide as in *purpurascens* but only slightly narrowed anteriorly (as in male of *purpurascens*), they are semi-quadrate, longer than wide, and have convex ends and nearly straight inner sides. Number II is the narrowest and VI is the widest and more nearly quadrate. All the spines are slightly smaller than in *purpurascens*.

Male. — The head is shaped like that of the female, but the abdominal pleurites are very different from those of the female and from the male of *purpurascens*. They are very narrow and very similar to those of the female of *semicracis*. The apodemes are slightly larger than those of *semicracis*, while the ventral side of head of pleurites is wider, having the same width as the apodemes, which increase in width from II to VIII; the inner sides are less concave than in the female of *semicracis*, and the spines are all smaller with VI obsolete. The tergal incrassations of both sexes are not so deeply colored or sharply defined as in *purpurascens*. The genitalia are extremely close to those of *purpurascens*, the only differences being in slightly shorter basal plate, slightly longer penis (but same width), and the presence on each side of apical portion of endomeral sac of a slight thickening or chitinization.

This subspecies is represented by two males and two females in type series and two females from the same host taken at Caracolcito, Dept. Magdalena, Colombia, March 2, 1941.

AMYRSEIDA SEMICRACIS JACQUÁZU new subspecies.

Figs. 36 to 38.

Types, male and female adults, from *Penelope obscura jacquáçu* Spix, were collected by the author at Puerto Yessup, Perú, Feb. 12, 1930 (in collection of author).

Diagnosis. — Female: The head is slightly wider at temples and antennae and considerably longer than any of the preceding races of *semicracis*; the whole front of head, from ocular slit, is almost circular (nearly as in *brunnescens*); but there is a slight flattening on each side of frons and a situation back of palpi; the temples are uniformly rounded with anterior margin perfectly straight.

The pterothorax is widely flaring with straight sides. It is narrower at mesothorax and slightly wider at posterior angles than in *purpurascens* (one of the widest of the races). The abdominal pleurites are rather wide, with number II the widest posteriorly (a most unusual condition in this group) and with very large apodemes (as wide as anterior, ventral end of pleurite). The heads of the pleurites are rounded: the inner margins are sinuate with unusually large, curved spines, that of number VI being even larger than II. The ends of the tergites are entirely without incrassations, those sclerites blending imperceptibly into the pleurites. Pleurites II to VI have five hairs on posterior margin, including one at lateral angle, as well as three small setae on face of III to VI and one on I.

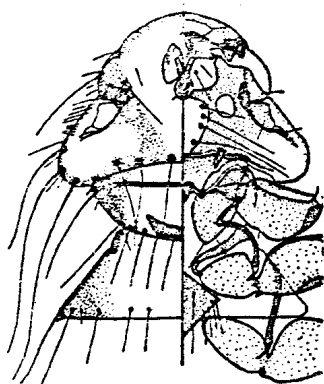


Fig. 36.
Amyrsidea semicracis
jacquáçu ♀
Head and thorax.

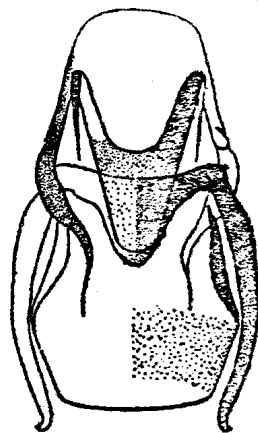


Fig. 37.
Amyrsidea semicracis *jacquáçu*
♂ genitalia.

Male. — The head is smaller and the anterior portion less circular than in the female; the sides of frons are more flattened, and the margin back of palpi is more sinuate. The pterothorax is much narrower, both at mesothorax and at posterior angles; the former does not extend laterally beyond the line of the metathorax.

The pleurites are very similar in size and shape to those of the female, but the apodemes are larger, and all spines excepting number II smaller; number II is the largest and the others decrease progressively in size to VI. Tergal incrassations are present, the round, anterior one being largely superimposed over the large apodemes.

The genitalia also present distinguishing characters. The basal plate is short and wide at distal end; the parameres are long and slender, the endomeral sac is wide, and the rods are much attenuated apically, ending in long, hair-like tips; the penis is also different. (See fig.).

This subspecies is represented by one male and two females, including the types.

AMYRSEIDA SEMICRACIS ABURRIS new subspecies.

Figs. 39 to 42.

Types, male and female adults, from *Aburria aburri* (Lesson), were collected by the author at Tierra Nueva (Marimundo), Sierra Perijá, Colombia, July 7, 1941 (in U. S. National Museum).

Diagnosis. — Female: The head is triangular in shape with very wide, rounded temples, narrow, rounded frons, and deeply concave occipital margin; a prominent, deeply pigmented blotch at ocular slit extends to the lateral margin; the prothorax is much wider than in *semicracis* and *purpurascens*, but the pterothorax is exactly the same width, with straight sides and mesothorax not projecting laterally.

The abdominal pleurites are wide and quadrate, most of them being as wide on posterior margin

and pointed medially and with temples not so uniformly rounded (see fig. of male head); the two long hairs set together on posterior side of left temple are found *only* on that particular specimen and then only on the left side; all others have but *one* strong hair at that position. The abdominal pleurites are even more quadrate than in the female, having straight anterior and inner sides; the spine on II is large and curving, on III is slightly smaller, on IV and V is much smaller, and on VI is obsolete; tergal incassations are well developed from

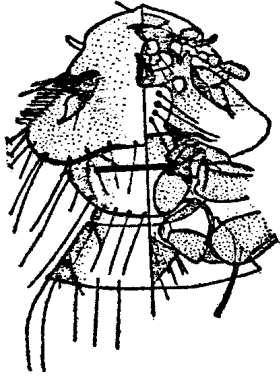


Fig. 39.
Amyrsidea semicracis aburris
♂ Head and thorax.

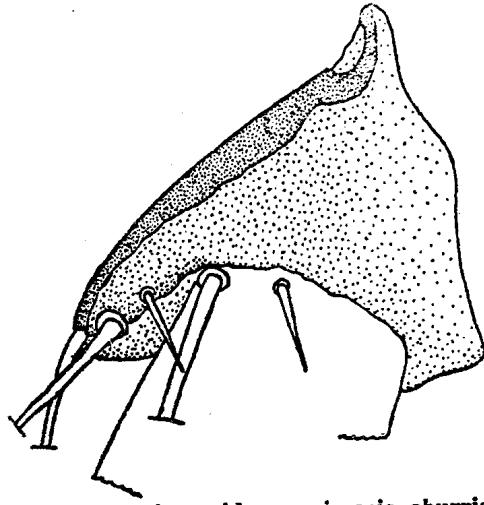


Fig. 40. — *Amyrsidea semicracis aburris*
♂ Pleurite I (ventral aspect).

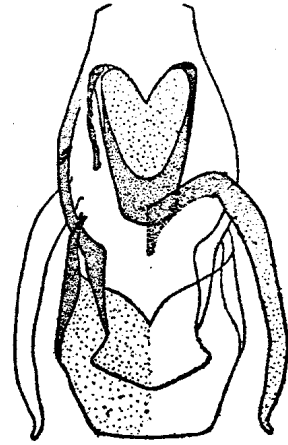


Fig. 42.
Amyrsidea semicracis aburris
♂ genitalia.

as long with anterior ends almost transverse and narrower than posterior ends; the inner side is straight on II and III and slightly convex on IV to VI; spines on II to VI are well developed, curving and pointed, diminishing slightly in size from II to VI. The whole pleurite is deeply and uniformly pigmented except along the posterior border; there are six fine hairs on posterior margin of II and III, seven on IV, eight on V, and seven on VI. Tergites are wide, rather deeply and uniformly pigmented, having incassations at ends of II to VIII, very small on II to IV and well developed on V to VIII. Apodemes are very strongly developed on II to VIII with II almost as large as VIII.

Male. — Head is of slightly different shape from that of female with frons proportionately wider

II to VIII with a small posterior one in I; all are deeply colored and sharply delineated and rounded in shape. On tergites IV to VII the anterior incassations seem to be double, both rounded, one overlapping the other. Apodemes are well developed.

Genitalia also present unique characters. The basal plate is elongated globular in shape; parameres are long and slender as in *jacúagu*; endomeral sac is similar in shape to *purpurascens* but with rods slender basally, thickened medially, and tapering to straight, slender tips to which are attached an apron-like sclerite. The penis is not clearly visible in any of the six males, but seems to be as shown in figure.

This subspecies is represented by six males and eleven females.

TABLE OF MEASUREMENTS

Segment	<i>A. semicracis brunnescens</i>				<i>A. semicracis jacúagu</i>				<i>A. semicracis aburris</i>				
	male		female		male		female		male		female		
	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	
Body			1.82	....	1.85	....	2.09	....	1.71	....	2.13	....
Head	{	occiput	4242456412456
		frons		.412	.65	.434	.615	.445	.663	.423	.64	.44	.684
		temples		.3938383940
Prothorax		.23	.445	.195	.434	.21	.458	.24	.445	.24	.485		
Pterothorax		.227	.597	.217	.564	.24	.61	.195	.55	.24	.64		
Abdomen		1.13	.835	1.07	.738	1.30	.868	1.03	.76	1.35	.91		
Basal plate			12				.152	.13			
Paramers				.163	....				.152	....		
Endomera				.142	.132				.108	.118			

AMYRSIDEA SEMICRACIS CHAMAEPETA new subspecies.

Figs. 43 to 47.

Types, male and female adults, from *Chamaepetes goudoti rufiventris* (Tschudi), were collected by the author at Rio Jelashti (Huallaga Basin), Peru, August 11, 1932 (in collection of author).

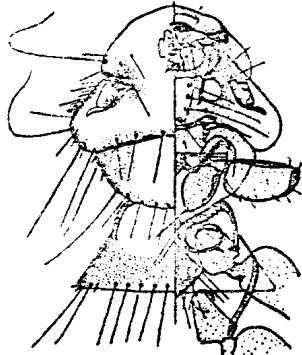


Fig. 43.
Amyrsidea semicracis
chamaepeta ♂
Head and thorax.

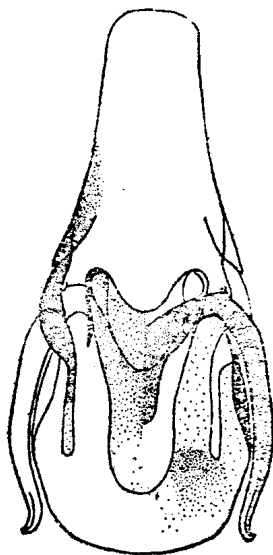


Fig. 44.
Amyrsidea semicracis chamaepeta
♂ genitalia.

The present race of *semicracis*, together with *sanctae-martae* and *guttata*, all from the avian genus *Chamaepetes*, seem to fall into a group characterized by wide, more or less quadrate pluerites in both sexes with numbers II to VI having fairly well developed, sub-equal spines (VI in *guttata* obsolete); the tergites are rather deeply pigmented,

Diagnosis. — The pre-ocular portion of the head is rather short and with margin roughly circular but with sides of frons slightly flattened and a swelling at palpi; temples are rather narrow, and the occipital margin is deeply concave with the prothorax attached near the margin of the head. The first coxae, as well as all three femora, are unusually small for this group. The abdominal pleurites are proportionally large, equal in the sexes and subquadrate with spines on II to VI well developed and sub-equal but somewhat larger in the female. Tergal incrassations are well marked (more deeply pigmented in male), and apodemes are strongly developed.

The male genitalia possess an unusually long and slender basal plate; endomeral rods are rather long and parallel-sided apically; penis is large with short, narrow lateral flaps. (See fig.).

The race is represented by seven males, four females, and two young females.

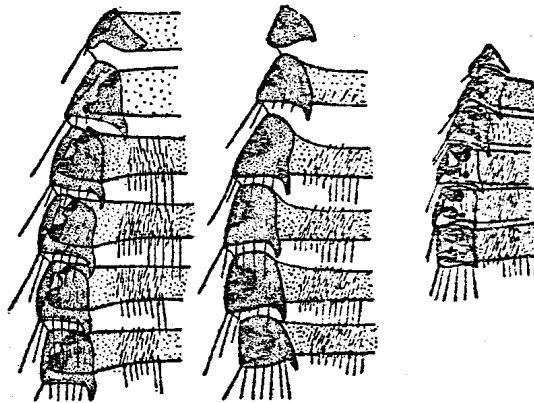


Fig. 47. — *Amyrsidea semicracis chamaepeta* ♀
Pleurites and ends of tergites I to VI,
with patches of sternal setae.

Fig. 49. — *Amyrsidea semicracis sanctae-martae* ♀
Pleurites I to VI; tergites II to VI,
with patches of sternal setae.

Fig. 52. — *Amyrsidea semicracis guttata* ♂
Pleurites I to VI; tergites II to VI,
with patches of sternal setae.

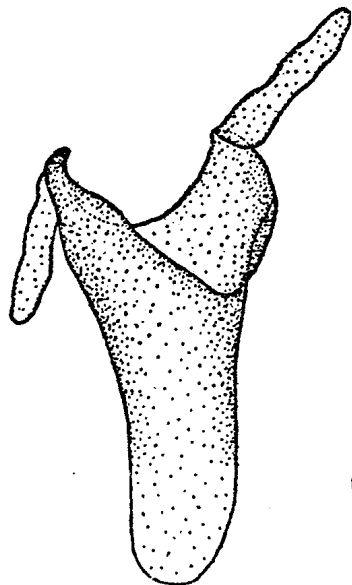


Fig. 45.
Amyrsidea semicracis
chamaepeta ♂
Penis.

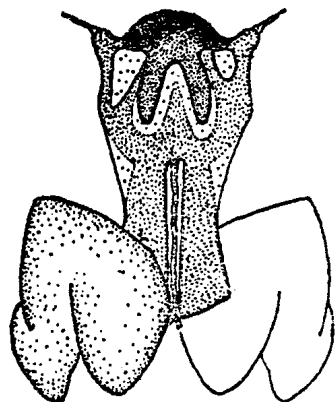


Fig. 46.
Amyrsidea semicracis
chamaepeta ♀
Pharyngeal sclerite and gland.

their ends bearing incrassations unusually prominent in *guttata*, medium in *chamaepeta*, and none at all in *sanctae-martae*. The pharyngeal sclerite is of unusual shape, the same in the three races, and differing from the other subspecies of *semicracis*.

AMYRSIDEA SEMICRACIS SACTAE-MARTAE new subspecies.

Figs. 48 and 49.

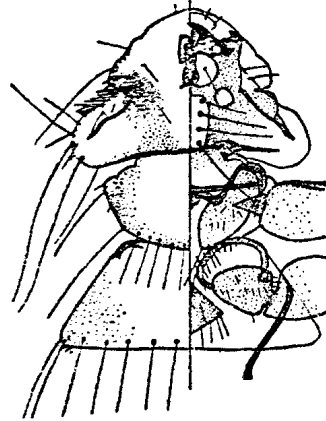
Type, female adult, from *Chamaepetes goudoti sanctae-martae* Chapman, was collected by the author at Cerro San Lorenzo, Dept. Magdalena, Colombia, September 13, 1945 (in U. S. National Museum).

Diagnosis. — Female: The female is characterized by the narrow temples and narrow, pointed, preocular portion of the head, by the shallow occipital emargination, and by having the prothorax attached at the very edge of occiput with a large portion of its anterior margin exposed at the sides. The eyes extend *beyond the fringed ocular margins*. This is the only species or subspecies of the genus from the *Cracidae* with this peculiarity. The coxae and femora are larger than those segments in the female of *chamaepetas*, and the pterothorax is also larger.

The abdominal pleurites have an extremely narrow dorsal aspect and are poorly pigmented, while the whole of the ventral aspect is uniformly and rather deeply colored with a darker patch next to outer edge in median portion; they are ventrally large, semi-quadrate, with rounded anterior ends, and with spines sub-equal and well developed for this group. (See fig.) The pleural apodemes appear to be wanting, while no trace of the ends of the tergites or their incrassations are visible.

Fig. 48.

Amyrsidea semicracis
sanctae-martae
Head and thorax ♀



NOTE. — This subspecies is represented by a single female, the type, which is not in perfect condition. Some of the characters described above, therefore, may possibly prove to be erroneous when more and better material can be examined.

AMYRSIDEA SEMICRACIS GUTTATAS new subspecies.

Figs. 50 to 53.

Type, male adult, from *Chamaepetes unicolor* Salvin, was collected by the author on the Volcano Turrialba, Costa Rica, October 8, 1907 (in collection of author).

Diagnosis. — This type is unusually small of body and large of head, the head being larger than that of the female of *sanctae-martae* and equal to that of *chamaepetas*. The attachment of the prothorax is unique in this group, being far under the head, pushing the whole occipital area forward and restricting the clear occipital portion to insignificant proportions. (See fig.). The hairs along each side of this clear area are crowded closely together. The pterothorax is very short and has widely flaring sides.

The abdominal pleurites are wide and quadrate, slightly longer than wide, and with anterior margin nearly straight in II to VI (the figure shows them

(too convex) as well as the inner sides. The dorsal aspect is of normal size and deeply pigmented with sternal side more deeply pigmented than usual; spines are small and pointed, obsolete on VI; apodemes are very large and strongly pigmented except

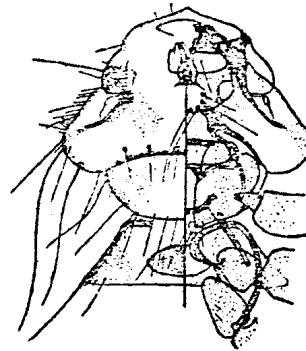


Fig. 50.

Amyrsidea semicracis guttata
Head and thorax ♂

at basal portion (see fig. of pleurite IV); tergites have ends bearing deeply pigmented, sharply defined incrassations, the anterior one lying partly over the apodeme.

The male genitalia differ from those of *chamaepetas* in having a shorter basal plate, shorter endomeral rods, abruptly attenuated apical portion

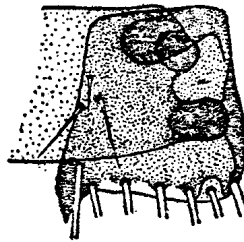


Fig. 51.

Amyrsidea semicracis guttata ♂
Pleurite N^o IV and apodeme, with end of tergite showing incrassations.



Fig. 53.

Amyrsidea semicracis guttata
♂ genitalia.

ending in a slender point; the penis is much shorter and wider, both apically and basally, with longer lateral flaps and much more deeply excised dorsal wall.

This race is well defined, outstanding, and easily recognized. It is a pity that it is represented by but a single male, the type, which lacks the third pair of legs except for the coxae. With additional material, including females, it might prove to be specifically distinct.

TABLE OF MEASUREMENTS

Segment	<i>A. semicracis chamaepeta</i>				<i>A. semicracis sanctae-martae</i>		<i>A. semicracis guttata</i>		
	male		female		female		male		
	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.84	....	2.34	....	2.44	....	1.62	....
Head {	frons	.....	.295	.....	.450	.....	.44	.....
	temples	.402	.577	.456	.673	.434	.65	.445	.673
	occiput	.3573939402
Prothorax	.210	.423	.25	.51	.25	.475	.228	.445	
Pterothorax	.235	.52	.262	.684	.303	.69	.206	.553	
Abdomen	1.15	.694	1.51	.90	1.39	.92	.91	.777	
Basal plate	.195	.133					.19	.14	
Paramers	.142	....					.152	....
Endomera	.15	.152					.13	.13	

AMYRSIDEA SPICULA SPICULA new species.

Figs. 54, 55 and 55-a.

Types, male and female adults, from *Ortalis v. vetula* (Wagler), were collected by the author at Tres Zapotes, Veracruz, Mexico. Marth, 16, 1940 (in U. S. National Museum).

Diagnosis. — This species is superficially much like *semicracis* in general shape and structure and with similar chaetotaxy excepting the patches of setae on third femora and sternites IV to VI, which consist, not of fine setae, but of coarse bristles of the same size as the other hairs along the anterior portion of the sternites.

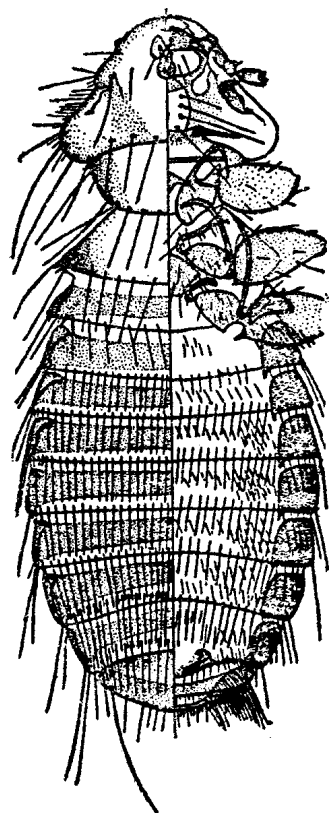


Fig. 54.
Amyrsidea spicula
spicula ♀

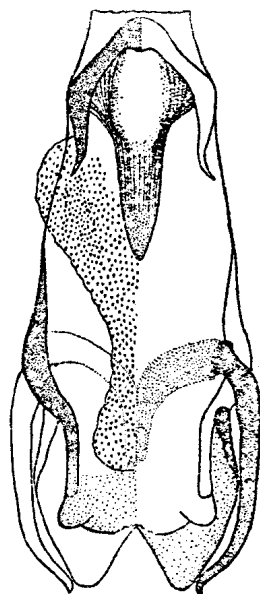


Fig. 55.
Amyrsidea spicula
spicula ♂ genitalia.

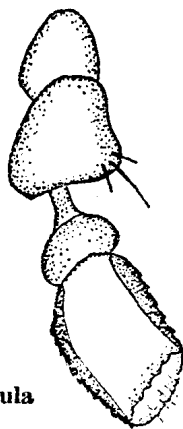


Fig. 55-a. — *Amyrsidea spicula*
spicula ♀ antenna.

The abdominal pleurites are quadrate, slightly longer than wide, uniformly pigmented, with small spines on II to IV, with angle slightly produced and rugose on V and VI; apodemes are well developed on III to VIII. The ends of the tergites overlie the sternal portion of the pleurites almost to dorsal aspect of sclerite and are of the same shape as in *semicracis* but are *without incrassations* or with merely a slight trace of the anterior one.

The genitalia are decidedly different in several respects from any of the species or subspecies treated in this paper in the structure of the penis, the endomerical sac, and especially the large sac attached to the penis whose membranous walls

are thickly dotted with minute spicules (see fig.). In the female the patches of setae are even coarser than in the male. On the third femora they are very sparse, having the hairs along the posterior margin of the patch much coarser and longer than the remainder. On sternites IV to VI the patches of hairs are sparser in the female than in the male, consisting of only ten to twelve coarse bristles. The pleurites are slightly larger than in the male, quadrate, with anterior and inner sides slightly convex, and anterior end somewhat narrower. There are small, pointed, curving spines, all subequal, on pleurites II to V; the angle of VI is slightly produced and pointed; apodemes are very small, and tergites are as in the male.

This species is represented by seven males and nine females, including types.

AMYRSIDEA SPICULA GARRULI new subspecies.

Figs. 56 to 58-a.

Type, female adult, from *Ortalis g. garrula* (Humboldt), was collected by the author at La Gloria, Dept. Magdalena, Colombia, May 20, 1943 (in U. S. National Museum).

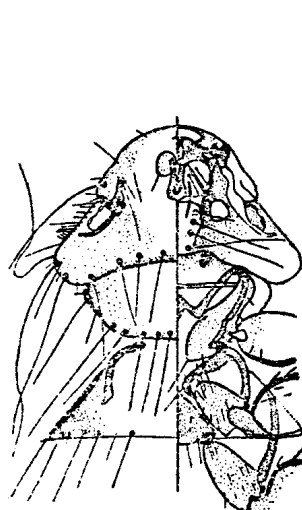


Fig. 56.
Amyrsidea spicula
garruli
Head and thorax ♀

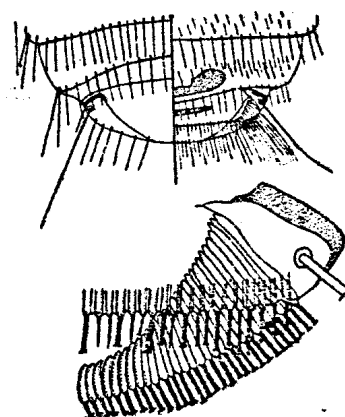


Fig. 57.
Amyrsidea spicula
garruli
♀ tip of abdomen.
Chaetotaxy of ventral aspect of last abdominal segment enlarged ♀

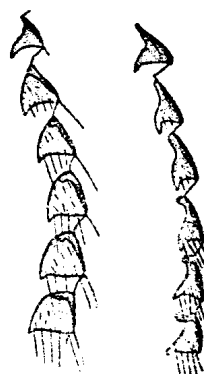


Fig. 58 (l.zq.).
Amyrsidea spicula
microspina ♀
Pleurites I to VI.

Fig. 58 (der.).
Amyrsidea spicula
garruli ♀
Pleurites I to VI.

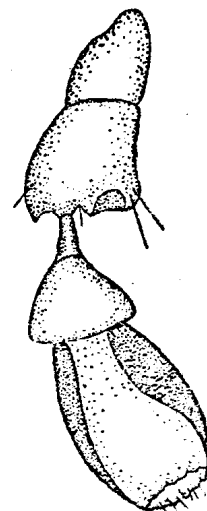


Fig. 58-a. — *Amyrsidea*
spicula
garruli
♀ antenna.

Diagnosis. — This subspecies differs from *spicula* as follows: The size is much larger, especially the head and thorax, prothorax is much wider, pterothorax is both wider and longer. The first coxae are of quite different shape (see fig.). The patches of setae on femora and abdominal sternites are the same as in female of *spicula* but slightly more abundant, ranging from seventeen to twenty with about twelve on sternite III. Tergites are as in *spicula* with a very slight incrassation in anterior portion where it slightly overlies the very strongly developed apodemes. The pleurites are much narrower than in *spicula*, with anterior portion narrower (no wider than apodemes); there are medium-sized, curving spines on segments I to V, diminishing in size from I backward, and a short, bluntly rounded spine on VI. This form, and the following one, are the only ones outside of the so-called "cracis" group which have a spine on pleurite I. This character, together with the narrow pleurites and large head and thorax, distinguishes the race from *spicula*.

The male was not taken. The race is represented by eight females, including the type. Without the male genitalia it is not possible to properly characterize this race, but I suspect that when taken it will be found to resemble *spiculum* except for detail.

AMYRSIDEA SPICULA MICROSPINA new subspecies.

Fig. 59.

Type, female adult, from *Ortalis r. ruficrissa* Scl. & Salvin, was collected by the author at La Cueva (near Distracción) Dept. Magdalena, Colombia, April 12, 1945 (in U. S. National Museum).

Diagnosis. — This subspecies is close to *garruli* but differs in detail. The head and thoracic segments are but slightly smaller (unimportant), but the temples are thicker with anterior portion of head from ocular slit forward more circular.

The abdominal pleurites are rather wide and poorly pigmented from the sternal aspect. Numbers I to III are triangular in shape, more quadrate posteriorly, with rounded anterior, inner angle. There are very small, sharply pointed spines on I to V, the longest on II. There is no trace of tergal incrassations, while the ends of the tergites apparently fall short of the inner edge of the pleurites. The patches of setae on the third femora and abdominal sternites are as in *spicula*.

The characters separating this race from *garrulac* are small but constant in the three females comprising the type series and seem to consist chiefly in shape of head, shape and pigmentation of abdominal pleurites, and very small pleural spines. It is very probable that the male, when taken, will show differentiating characters in the genital armature.

AMYRSIDEA SPICULA subspecies.

There are two males in my collection from *Ortalis garrula cinereiceps*, taken on the Sixsola River, Costa Rica, in 1903, which are in too poor a condition to properly identify. Unquestionably they belong to the *spicula* group and have fairly wide, nearly quadrate pleurites with spines reduced to merely sharp, transparent points at the angles of II to V. The genitalia are impossible to delineate without dissection.

TABLE OF MEASUREMENTS

Segment	A. spicula spicula				A. spicula garruli		A. spicula microspina		
	male		female		female		female		
	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.69	....	1.84	....	2.06	....	2.15	....
Head {	frons3739143444
	temples	.36	.555	.39	.597	.423	.662	.432	.64
	occiput	.328353738
Prothorax	.217	.412	.217	.435	.228	.49	.217	.49	
Pterothorax	.217	.51	.23	.61	.27	.67	.25	.64	
Abdomen	1.04	.69	1.17	.805	1.26	.83	1.07	.90	
Basal plate	.23	.15							
Paramers	.163	....						
Endomera	.098	.14							

AMYRSIDEA PRAEGRACILIS PRAEGRACILIS new species.

Figs. 62 to 65.

Types, male and female adults, from *Odontophorus gujanensis polionotus* Osgood & Conover, were collected by the author at Bella Vista (Rio Tarra), Santander N., Colombia, July 7, 1943 (in U. S. National Museum).

Diagnosis. — This species is characterized by a small head with very small temples and prominent circular frons, large prothorax, long slender body

in both sexes, and pleurites reduced to a narrow pigmented line dorsally and a wider ventral portion which is so faintly pigmented as to be almost invisible (of same color as the wide, continuous tergites).

The mandibles are heavy, the left bifurcated, the right bluntly pointed; palpi and especially antennae are large; the pharyngeal sclerite is of the same type as in the species of *Menacanthus* found on the Gallinaceous birds and totally different from the other species of *Amyrsidea* treated in this

paper. The ocular slit is completely covered by the eye, which extends both anteriorly over the slit and laterally beyond the margin bearing the ocular fringe. There are no deeply pigmented areas on the head, there is merely a light brown area surrounding the ocular slit, another at base of palpi and on each side of pharyngeal sclerite, and a narrow band along the occipital margin.

The temples bear four long hairs (instead of three as in the species on the *Cracidae*), while the remainder of the chaetotaxy of the head is similiar in pattern.

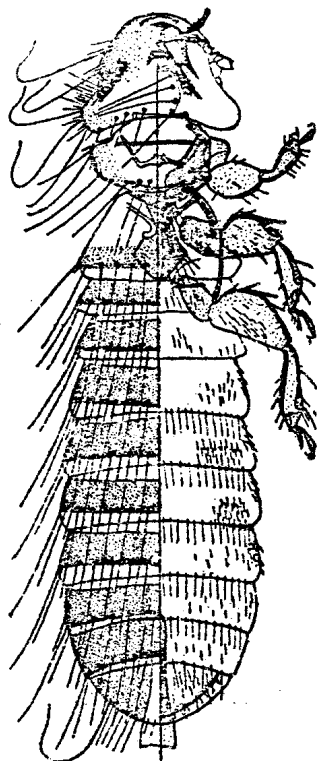


Fig. 62.
Amyrsidea praegracilis
praegracilis ♂

The prothorax is strongly developed, being nearly as wide as temples, and is attached at very edge of occiput. Its structure and chaetotaxy, together with the first coxae, are the same as in the species found on the *Cracidae*. The pterothorax is small, scarcely wider than segment I of the abdomen, with straight, divergent sides, broadly rounded lateral angles, and flatly convex posterior margin (slightly more convex than shown in figure), and set with seven long, strong hairs and a spine on each side (including those at angle). The promeso and metanotum are well developed, the first as in some of the forms on the *Cracidae*, the second quite different, and the last similiar to all species found on the *Cracidae* and with similiar chaetotaxy (see fig.).

The abdomen is similiar in shape in both sexes and consists of nine segments; the tergites are continuous, similiar in the sexes and rather strongly pigmented, the pleurites are wider ventrally in the female, and in both sexes the sternal portion ex-

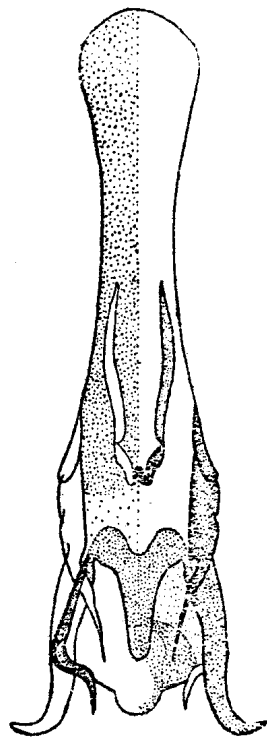


Fig. 63.
Amyrsidea praegracilis
praegracilis
♂ genitalia.

tends posteriorly far beyond the line of the sternites and slightly overlaps the head of the succeeding pleurite. The abdomen is densely hirsute with a long, strong hair, a long, slender spine in the angles of the segments, and a row of coarse hairs across the posterior edge of the tergites. The rows of hairs across the sternites are set almost under those of the tergites and *not* at the margin of the sternites, which is much further back; there are also some short hairs across the median, anterior portion of the sternites; all of the pleurites, except number I, bear about six strong hairs across their posterior portion *under the line of hairs on tergites* but not on the hyaline portion of pleurites which extends backward. There are also about six strong bristles on their sternal face.

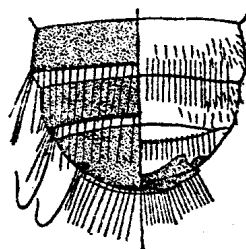


Fig. 64.
Amyrsidea praegracilis
praegracilis ♀
Tip of abdomen.

Fig. 65.
Amyrsidea praegracilis praegracilis ♂
Antenna.



The patches of setae on third femora and abdominal sternites IV to VI are rather sparse and coarse with a few bristles of the same size in the same area on III and VII. In the female both tergal and sternal hairs are slightly more numerous and a little coarser. On the tergites every third or every fourth hair is much longer than the others.

The legs are comparatively small with short thick femora and tibiae, well furnished with strong spines, and bearing wide, deeply pigmented margins. (See fig.).

The male genitalia differ considerably from those of the species on the *Cracidae*. There is a long, slender basal plate and shorter parameres with strongly out-curved tips; there is a smaller endomerical sac and rods and an additional shorter endomerical rod lying outside the ones across the sac (see fig.). In the female segment IX is broadly rounded with various fringes of strong hairs and fine setae and a well-developed sternal genital plate which extends beyond the dorsal margin of the segment.

NOTE. — This species has the pleurites very similiar to those of *M. striatum* Kell. (taken on *Lagopus*), but the shape of the head and abdomen, as well as the type of male genital armature, is very different. It is represented by a large series of both sexes.

AMYRSIDEA PRAEGRACILIS GUJANENSIS new subspecies.

Figs. 66 to 68.

Types, male and female adults, from *Odontophorus g. gujanensis* (Gmelin), were collected by the author at El Callao, Venezuela, May 10, 1910 (in collection of author).

Diagnosis. — This subspecies differs chiefly from the nominate form in size and proportions, being considerably shorter of body and wider of abdomen in both sexes. The head of the male is narrower at the temples, but of the same length and width at frons. In the female it is shorter but with other measurements about the same (slightly narrower at temples). The pterothorax is of the same length as the prothorax and equal in the sexes (longer in *praegracilis*). The antennae are shorter, the basal plate considerably longer and wider. The paramers are slightly smaller and the endomera narrower. The C. I. is greater in the male, less in the female.

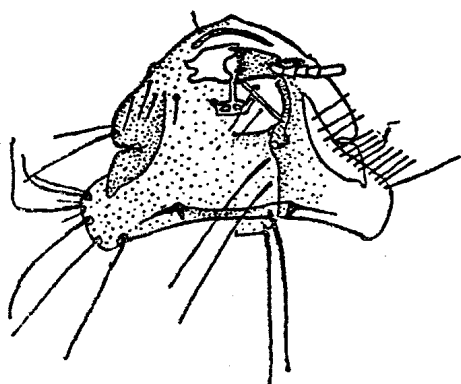


Fig. 66.
Amyrsidea praegracilis gujanensis ♂
Head.

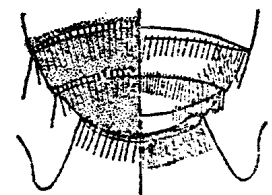


Fig. 67.
Amyrsidea praegracilis gujanensis ♀
Tip of abdomen.

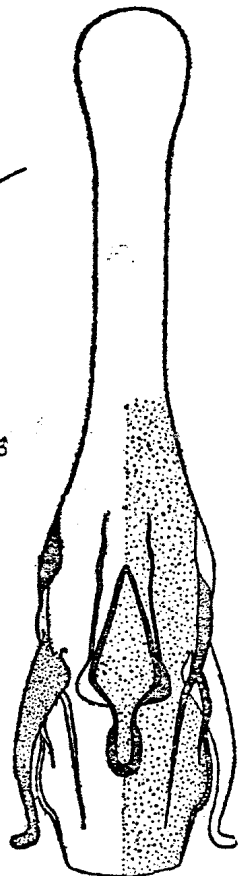


Fig. 68.
Amyrsidea praegracilis gujanensis ♂
genitalia.

The front of the head is noticeably pointed with distance from mandible to frontal margin greater, the occipital plate extends backward beyond the dorsal occipital margin and is of different shape, being almost parallel-sided with posterior end squarish but with rounded angles. The coxae are also of slightly different shape. All femora are slightly shorter and tibiae considerably shorter, the spines along the apical portion of the second and third tibiae are very much thicker but no longer.

The genitalia differ considerably in detail, the basal plate being much longer with shaft much

slenderer and the basal portion (just behind point of attachment of paramers) wider; the paramers are somewhat more slender; the prominent lateral chitinized supports of the endomeral sac are lacking. There is merely a slight chitinization of the lateral walls of the sac; the penis is also very differently shaped. (See fig.).

This subspecies is represented by two males and two females, including the types.

AMYRSIDEA PRAEGRACILIS CUMBRENSIS new subspecies.

Figs. 69 and 70.

Types, male and female adults, from *Odontophorus columbianus* (Gould), were collected by the author at La Cumbre de Valencia, Venezuela, Oct. 10, 1910 (in collection of author).

Diagnosis. — This race is closer to *gujanensis* than to *praegracilis*, the measurements, running very close to the former. Some are slightly greater, others less, but most differences are not greater than attributable to individual variation. The pterothorax in the male, however, is the widest of the three races, while in the genitalia there are noticeable differences in proportion and shape. The occipital plate is similar to that of *gujanensis* but is less parallel-sided, the posterior end being narrower while the frons is more rounded as in *praegracilis*. The legs are small and have the same thickened spines on the second and third tibiae as in *gujanensis*.

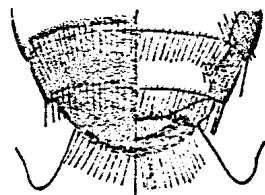


Fig. 69.
Amyrsidea praegracilis cumbrensis
Tip of ♀ abdomen.

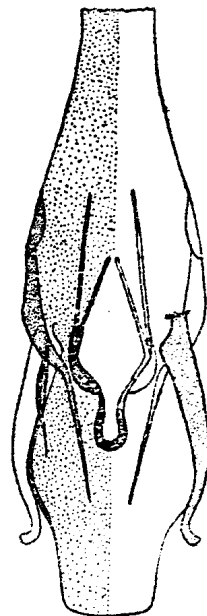


Fig. 70.
Amyrsidea praegracilis cumbrensis ♂
genitalia.

The genitalia differ from both *praegracilis* and *gujanensis*, being somewhat intermediate between the two. The basal plate is long, slender and constricted medially as in *gujanensis*, but the parameres are more slender apically and have shorter tips than either of the other races; there is a remnant left of the lateral chitinized support along sides of endomeral sac, while the penis differs in shape from both.

On the whole *cumbrensis* is very close to *gujanensis* but differs sufficiently to merit subspecific separation. From the taxonomic position of the

hosts, *gujanensis* should be closer to *praegracilis* than to *cumbrensis*, but the reverse is true. Geographically the range of *cumbrensis* lies between that of the other two races but much closer to that of

praegracilis from which it differs most conspicuously.

This subspecies is represented by four males and five females, including the types.

TABLE OF MEASUREMENTS

Segment	A. p. praegracilis				A. praegracilis gujanensis				A. praegracilis cumbrensis				
	male		female		male		female		male		female		
	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	l.	w.	
Body	1.88	....	2.00	....	1.71	....	1.91	....	1.74	....	1.90	....
Head {	frons33533532633833347
	temples	.326	.44	.326	.445	.303	.412	.31	.435	.314	.415	.328	.445
	occiput	.29228228228228285
Prothorax	.174	.39	.174	.39	.195	.355	.195	.375	.195	.37	.195	.37	
Pterothorax	.217	.445	.217	.477	.195	.50	.217	.52	.195	.50	.217	.52	
Abdomen	1.06	.564	1.38	.65	1.13	.65	1.30	.716	1.14	.673	1.28	.738	
Basal plate	.37	.108			.456	.12			.52	.12			
Paramers	.14	....			.16	....			.122	....		
Endomerai sac	.15	.108			.113	.198			.14	.098			
C. I.	.72	.03	.74	.96	.75	.94	.72	.90	.74	.93	.70	.90	