

Petaloctenus, a new genus of Ctenidae from West-Africa (Arachnida, Araneae)

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Summary

A new genus of Ctenidae (*Petaloctenus*) is described from West Africa. The genus contains three species, *P. bossema* sp. n., the type species, *P. songan* sp. n. and *P. clathratus* (Thorell). The taxonomic position of the new genus is discussed in the light of the present knowledge of the systematics of African Ctenidae. A key to the African genera of Ctenidae is provided.

Résumé

Un genre inédit de Ctenidae (*Petaloctenus*) est décrit de l'Afrique de l'Ouest. Le genre contient trois espèces, *P. bossema* sp. n., l'espèce type, *P. songan* sp. n. et *P. clathratus* (Thorell). La position taxinomique du nouveau genre est discutée dans le cadre de notre connaissance actuelle des Ctenidae. Une clef des genres Africains de Ctenidae est présentée.

Introduction

Notwithstanding the importance of Ctenidae in rain forest in general (HÖFER et al. 1994) and African rain forest in particular (JOCQUÉ & STEYN, in preparation), the taxonomy of the African members of the family is very poorly known.

Roewer (1954) (first figure) mentions 120 species of Ctenidae from Africa whereas presently (DIPPENAAR-SCHOEMAN, & JOCQUÉ, 1997) there are 104 species distributed as follows (second figure):

Africactenus Hyatt (0, 17) *Anahita* Karsch (14, 15), *Apolania* Simon (1, 1), *Caloctenus* Keyserling (7, 0), *Ctenus* Walckenaer (87, 58), *Pseudoctenus* Caporiacco (1, 1), *Thoriosa* Simon (3, 4), *Trogloctenus* Lessert (0, 1), *Viridasius* Simon (0, 1), *Vulsor* Simon (7, 6). Both the latter, only known from Madagascar and surrounding islands will not be considered further in this paper as their systematic status and whether they belong in the Ctenidae is uncertain for the moment.

Apart from papers by DES ARTS (1912) and HYATT (1954) there is a series of articles by BENOIT (summarized in BENOIT 1981) which might give the impression that the

African Ctenidae are well known. Benoit's contributions are purely alphataxonomic and have failed to give good diagnoses of the genera. Some genera were not mentioned (*Pseudoctenus* Caporiacco) or the species were simply incorporated in *Africactenus* (*Caloctenus* Keyserling) or *Ctenus* Walckenaer and *Anahita* Karsch (*Leptoctenus* L. Koch) without explanation. The genera *Anahita* and *Africactenus* were fairly well treated as far as the species are concerned but the problem areas of *Ctenus* were avoided by synonymizing species in which the epigynes show superficial similarities (e. g. the species around *Ctenus nigromaculatus* Thorell and *Ctenus pilosus* Thorell) which explains the discrepancy in number of *Ctenus* species before and after Roewer. Benoit's taxonomy was indeed mainly based on the shape of the epigynes which resulted in some groups of species that may appear to be only remotely related. This situation will inevitably result in the erection of a number of new genera.

Owing to the absence of good generic definitions, BENOIT (1980) failed to recognize the existence of at least one aberrant species, *Ctenus clathratus* Thorell, in the genus *Ctenus* although DES ARTS (1912) had already removed it and BENOIT's (1980) own drawing clearly shows the unusual shape of the epigyne.

During recent research in rain forest in eastern Ivory Coast we found fifteen species of Ctenidae. Two of them, among which the most common one, are undescribed, and appear strongly related to *Ctenus clathratus*. That species was only known from a single female and considered aberrant by DES ARTS (1912) on the base of the spination of the anterior legs. Males as well as females of the Ivorian species have particular apomorphies which support the erection of a new genus.

It might seem premature to describe a new genus in the present rather confused state of the ctenid taxonomy. However, there is little doubt that these species do indeed belong to the Ctenidae (s.s.). In this group the epigyne is characterized by a couple of horns whereas the male palp is characterized by the concave median apophysis which supposedly clasps over an epyginal horn during copulation. It is further clear that they represent a genus which is

different from the other African taxa of that level so far described as explained under "affinities" below.

Abbreviations

** : (after a number) spines in pairs

ALE: anterior lateral eyes

AME: anterior median eyes

AS: anterior spinnerets

d: dorsal

disp: dispersed, not in obvious rows

F: femur

MOQ: median ocular quadrangle

MS: median spinnerets

Mt: metatarsus

P: patella

pl: prolateral

PLE: posterior lateral eyes

PME: posterior median eyes

PS: posterior spinnerets

rl: retrolateral

T: tibia

t: (before a number) terminal (in connection with pairs of spines)

ta: tarsus

v: ventral

All measurements are in mm.

Type material is deposited in the "Koninklijk Museum voor Midden-Afrika" (MRAC). Male and female paratypes of the new species are deposited in KBIN (Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels) and CAS (California Academy of Sciences, San Francisco).

PETALOCTENUS new genus

Diagnosis

Representatives of this genus are recognized by the absence of a pair of terminal spines on tibia I and II; the epigyne is a solid plate without any membranous depression; the male palp is characterized by the large retrolateral apophysis standing out and the very large median apophysis, the large basal, modified part of the cymbium and the well developed, sometimes sclerotized, terminal apophysis. The venter of the abdomen is provided with a dark spot just in front of the spinnerets.

Type species

Petaloctenus bossema new species.

Other species included

Petaloctenus songan new species, *Ctenus clathratus* Thorell.

Etymology

The genus name is a combination of *πεταλον* (Greek

for "leaf") and *Ctenus*. Specimens of the type species were found to sit mainly on living leaves of tiny trees. The gender is male.

Description

Medium size to large spiders (8-14mm) with fairly broad carapace (L/W 1.2-1.5), widest between coxae II and III, slightly dipped just in front of the well marked fovea; highest point in profile just behind fovea; narrowed in front to 0.60 maximum width in females and to about 0.45 times maximum carapace width in males.

Colour. Carapace, pale yellow with greyish markings consisting of faint radiating striae and a dark band along the border; chelicerae slightly darker yellow; sternum pale yellow. Legs yellow with faint darker annulations. Abdomen pale yellow with brownish grey markings: dorsum brown with pale central stripe with sinuous sides; sides mottled with brown; venter pale yellow with dark grey spot consisting of patch of dense black hairs, just in front of spinnerets.

Second eye row procurved (tangent along posterior eye margins is more strongly procurved than tangent along anterior eye margins is recurved); MOQ longer than wide and narrower in front than in the back. Clypeus as high as the diameter of an AME.

Chilum double, poorly delimited, only lower central edge sclerotized. Chelicerae with two teeth on promargin and four teeth on retromargin. Labium as wide as long. Endites rectangular, slightly constricted in the middle. Sternum subcircular.

Legs. formula 1423 in males 4123 in females. T+P 1.7 times carapace length in males, 1.4 times in females. Spination well developed, characterized by four (some males) or five ventral pairs of spines on tibia I and II but without a terminal pair. Hair tufts on tarsi well developed; paired claws with four teeth of which the most proximal is tiny. Scopula on tarsi continuing on Mt of first pairs. Trichobothria in several rows on tarsi and Mt; base with four folds.

Abdomen oval, elongate. Colulus well developed. Spinnerets: in females, AS with short cylindrical terminal segment provided with large field of pyriform gland spigots and two major ampullate gland spigots in females (fig. 21); MS laterally flattened (fig. 23), covered with cylindrical and aciniform gland spigots and PS with a dome-shaped terminal segment also covered with a mix of cylindrical and aciniform gland spigots (fig. 24); in males AS with only 1 major ampullate gland spigot and a nubin (fig. 22); MS cylindrical; both MS and PS without aciniform gland spigots.

Male palp with long tibia, provided with a large retrolateral apophysis standing out; cymbium modified with extended base; median apophysis very large, inserted on posterior part of tegulum; terminal apophysis well developed, sometimes sclerotized. Epigyne with solid plate, without membranous parts, clearly standing out above the surrounding membranous tegument. Entrance openings far in front; entrance ducts short, leading to spermathecae

located near the centre of the epigyne; fertilization ducts directed backwards.

***Petaloctenus bossema* new species**
(figs. 1-11, 17-19, 21-24)

Type material

Male holotype. Côte d'Ivoire, Appouesso, Forêt Classée de la Bossematié, primary rain forest (grappe 12), night catch, on green leaf 17.XI.1994, R. Jocqué & L. Baert (MRAC 205.509). Paratypes. same locality as holotype: 10♂ 11♀: 17.XI.1994 -26.XI.1994, R. Jocqué & L. Baert; 14♂, 27♀, 13.XI.1995-5.XII.1995, R. Jocqué & T. Steyn; 8♂ 14♀: 8.III.1996-26.III.1996, T. Steyn (all in MRAC, 1♂ 1♀ in KBIN and CAS).

Other material

1♂, 3♀: Mébifon, Forêt classée de Mabi, 27-28.XI 1994, R. Jocqué & L. Baert; 10♂ 11♀: as previous, 12-13.XII.1995, T. Steyn.

Diagnosis

Males are recognized by the large retrolateral tibial apophysis (figs 7, 9) standing out at a right angle with the axis of the tibia and by the large median apophysis which is almost as long as the bulbus. Females are recognized by the shape of the epigyne plate (figs 10, 18, 19) which is roughly diamond-shaped with rounded sides and a slight frontal indentation.

Description

Male holotype: total length 8.1; carapace 4.2 long, 3.4 wide.

Colour (fig. 1): carapace pale yellow with faint grey pattern, in center and along margin, with wide pale band in between. Abdomen pale yellow with pale brown pattern on dorsum: a central pale band with sinuous sides and some brown patches; sides mottled with brown; venter pale yellow with dark spot in front of spinnerets.

Eyes: Diameter AME: 0.30; ALE: 0.18; PME: 0.38; PLE: 0.36; distance AME-AME: 0.10; AME-ALE: 0.28; ALE-PL: 0.08; PME-PME: 0.20; PME-PL: 0.22. MOQ: AW = 0.73 PW; AW = 0.92 L.

Legs:

Spination

	F	P	T	Mt
I	pl3d3rl4	pl1rl1	pl2d2rl2v8**	pl6rl6v1
II	pl4d3rl4	pl1rl1	pl2d3rl2v8**	pl6rl6v1
III	pl4d3rl4	pl1rl1	pl2d3rl2v4**t2	disp9 vt2
IV	pl4d3rl2	pl1rl1	pl2d3rl2v4**t2	disp9 vt2

Measurements

	F	P+T	Mt	ta	Tot
I	5.0	7.0	5.3	2.1	19.4
II	4.2	5.8	4.4	1.6	16.0
III	3.6	4.4	3.7	1.3	13.0
IV	5.1	5.9	6.2	1.8	19.0

Male palp (figs 7-9)/ tibia with broad, prolateral apophysis standing out at almost right angle with axis of segment; tip slightly curved down; cymbium with extended base, top of base with sharp-tipped swelling, inferior

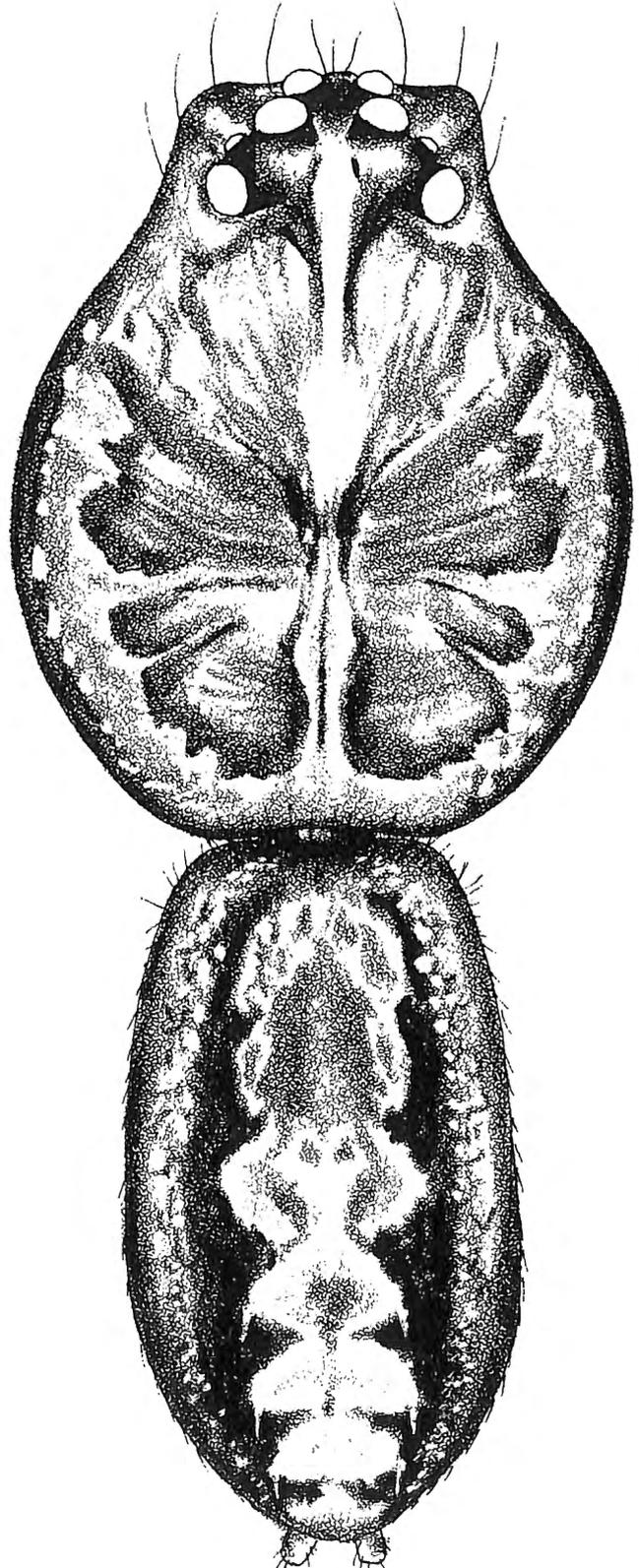
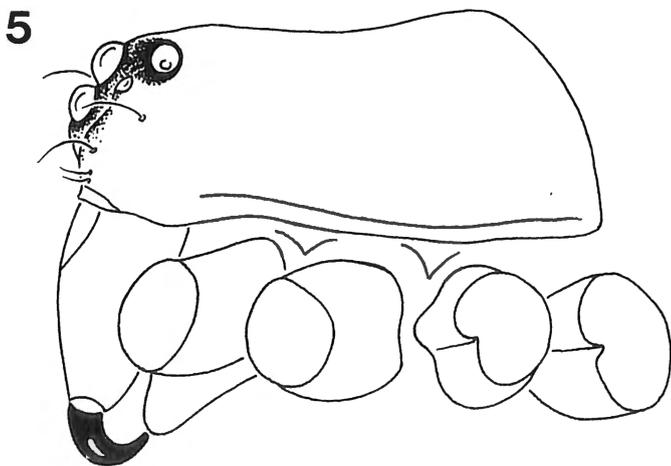
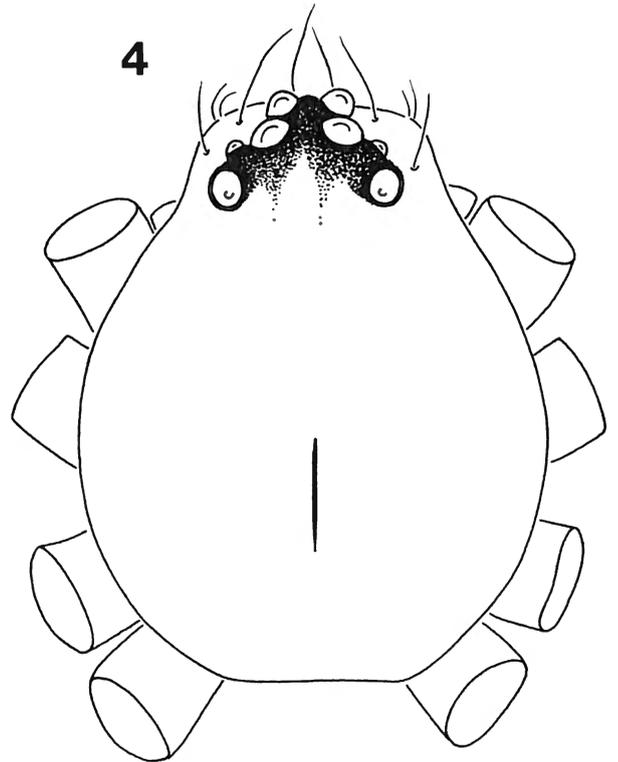
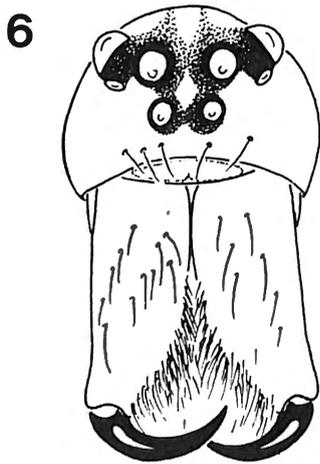
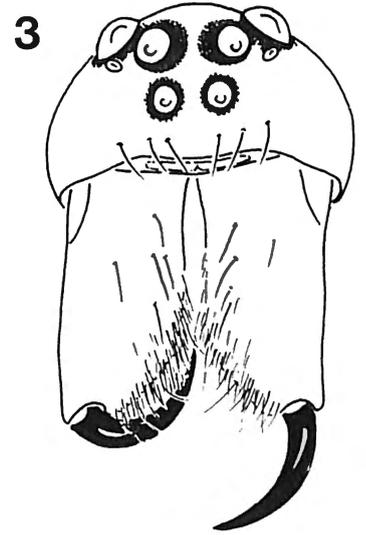
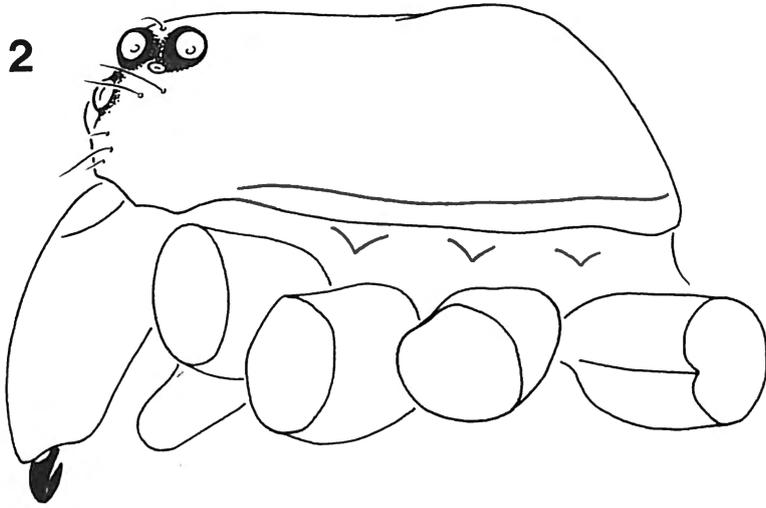
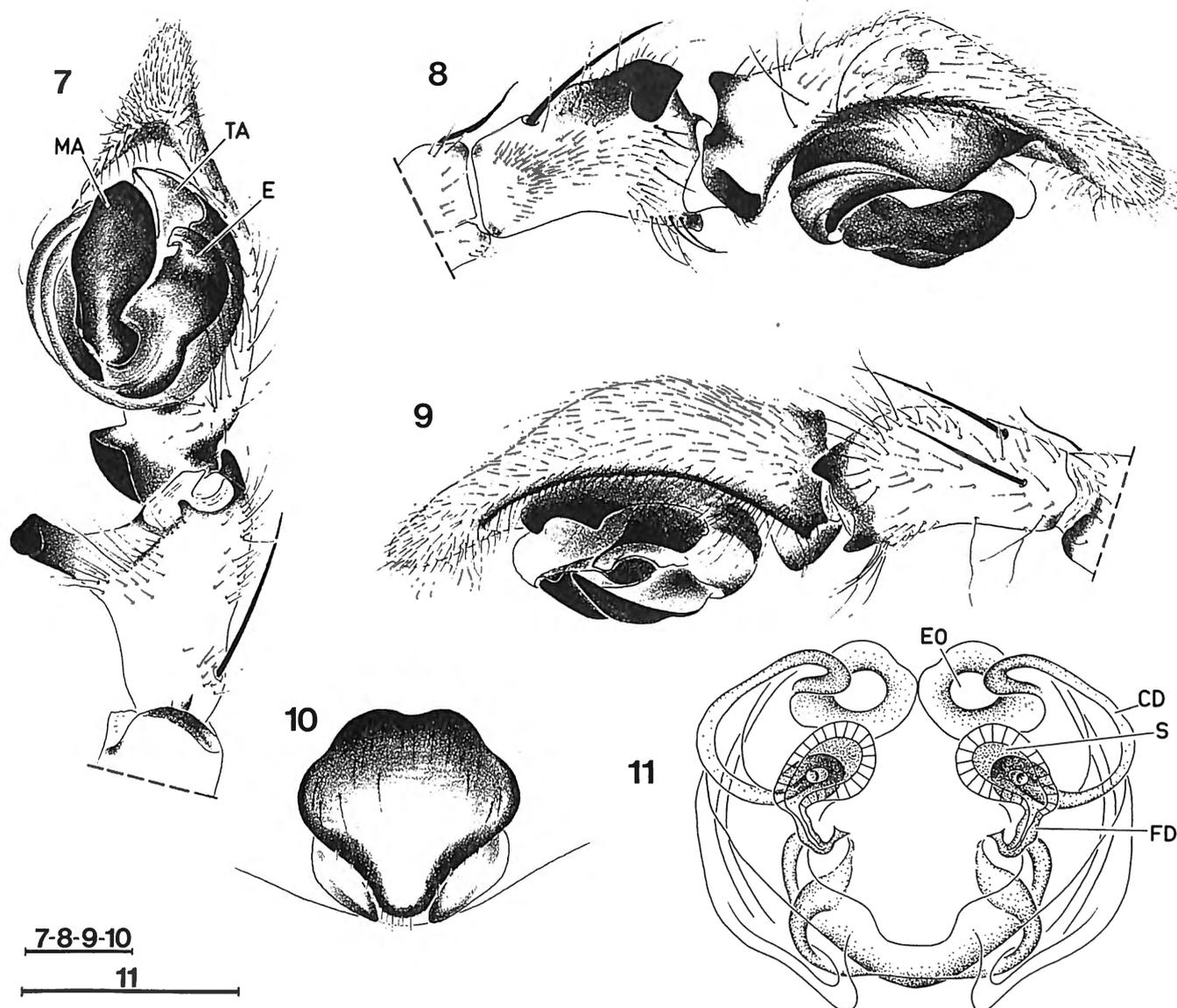


Fig. 1. – *Petaloctenus bossema*, Female carapace and abdomen, dorsal view. Scale line: 1mm.





Figs 7-11. - *Petaloctenus bossema*, 7-9. Male right palp. 7. Retrolateral. 8. Prolateral. 9. Ventral. 10-11. Epigyne; 10. Ventral. 11. Dorsal, cleared. Scale lines: 1 mm. E: embolus; MA: median apophysis; TA: terminal apophysis; EO: entrance opening; CD: copulatory duct; S: spermatheca; FD: fertilization duct.

part of base with rounded swelling. Embolus slightly curved inward; with truncated tip. Median apophysis large, spoon-shaped, inserted on posterior end of membranous part of tegulum; distal apophysis clearly sclerotized.

Female (MRAC 205.508). Total length 9.2; carapace 4.4 long, 3.5 wide.

Colour: as in male.

Eyes: Diameter AME: 0.28; ALE: 0.18; PME: 0.36; PLE: 0.32; distance AME-AME: 0.14; AME-ALE: 0.30; ALE-

PLE: 0.14; PME-PME: 0.30; PME-PLE: 0.34. MOQ: AW = 0.75 PW; AW = 0.89 L.

Legs:

Spination

	F	P	T	Mt
I	pl2d3rl3v1 -		v10**	v6**
II	pl3d3rl3v1 -		pl1v10**	v6**
III	pl3d4rl3	pl1rl1	pl2d3rl2v4**t2	disp12 vt2
IV	pl2d3rl3	pl1rl1	pl2d3rl2v2t2	disp10 vt2

Measurements

	F	P+T	Mt	ta	Tot
I	4.0	6.0	3.7	1.2	14.9
II	3.9	5.4	3.4	1.2	13.9
III	3.4	3.9	3.1	1.0	11.4
IV	4.5	5.2	5.4	1.4	16.5

←
Figs 2-6. - *Petaloctenus bossema* 2-3. Female carapace. 2. Lateral. 3. Frontal. 4-6. Male carapace. 4. Dorsal. 5. Lateral. 6. Frontal. Scale line 1 mm.

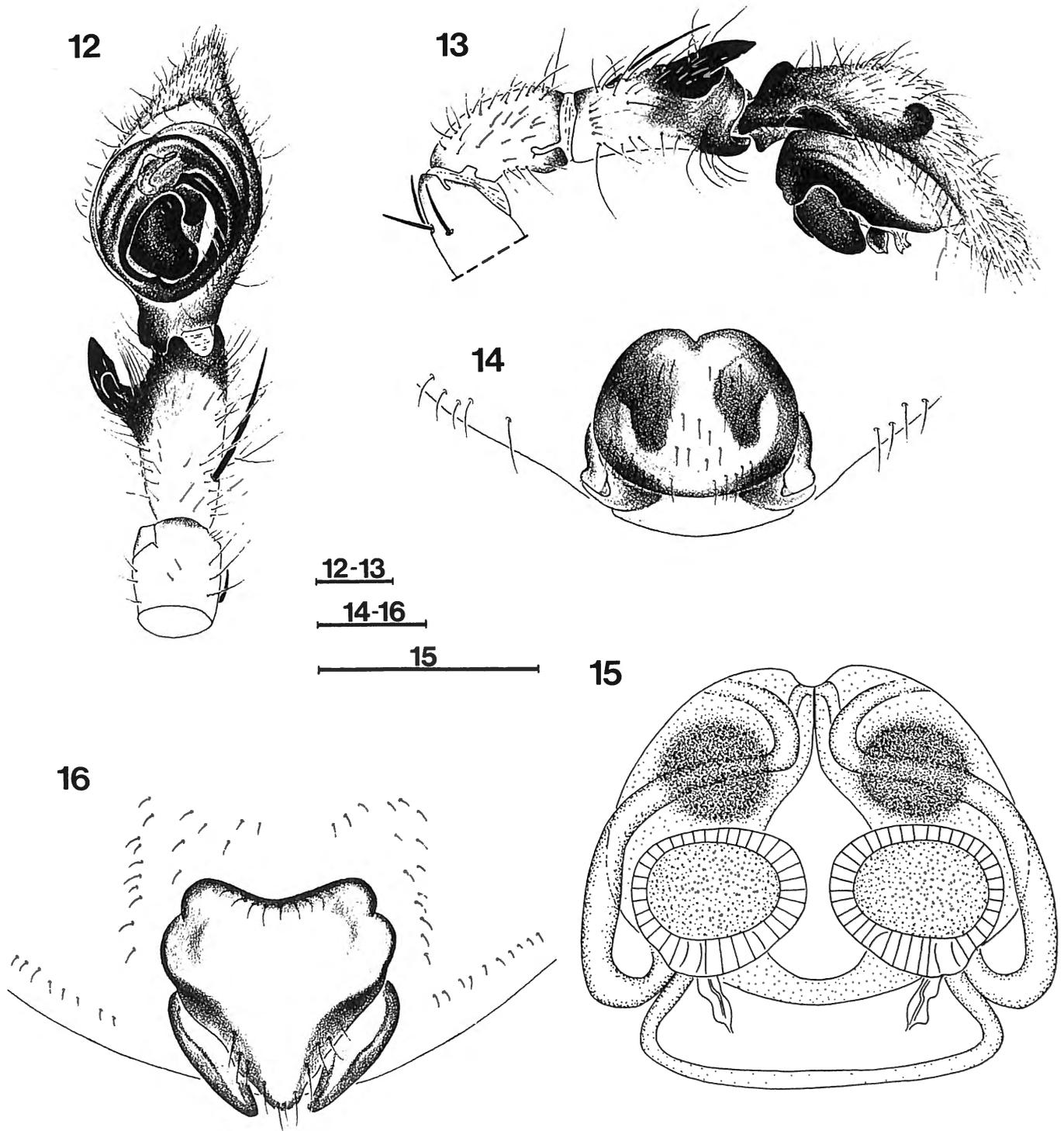
Epigyne (figs 10-11, 18-19): with a well delimited, roughly diamond-shaped plate, anterior margin slightly indented. Entrance openings in front; copulatory ducts short and curved; spermathecae oval, slightly in front of centre; fertilization ducts directed back- and inwards slightly recurved near the extremity.

Distribution

The species is known from the main forest blocks in eastern Ivory Coast.

Etymology

The specific name is a noun in apposition derived from



Figs 12-15. – 12-14. *Petaloctenus songan* n. sp. 12-13. Male palp. 12. Ventral. 13. Retrolateral. 14-15. Epigyne. 14. Ventral. 15. Dorsal, cleared. 16. *Petaloctenus clathratus* (Thorell), epigyne, ventral. Scale lines: 1 mm.

the name of the forest in which the type series was collected.

***Petaloctenus songan* new species**
(figs 12-14, 20)

Type material. Male holotype. Côte d'Ivoire, Forêt Classée de Songan; primary rain forest near Comoé river, night catch, on dead leaf, 14.III.1996, T. Steyn & Kra Kouassi (MRAC 205.507). Paratypes. Same locality as holotype; 5 ♂ and 8 ♀ caught between 12.III and 14.III.1996 (all in MRAC, 1♂ 1♀ in KBIN and CAS).

Other material. None. *P. songan* and *P. bossema* were not found together. They may be mutually exclusive although the latter was primarily found on green leaves whereas the preferred substrate of the former are dead leaves in the litter layer.

Diagnosis. Males are recognized by the large retrolateral

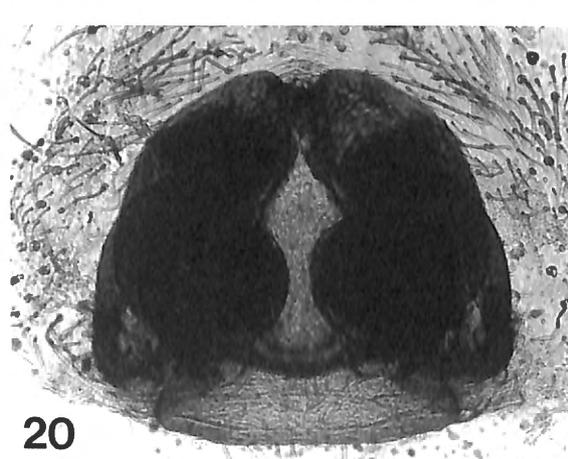
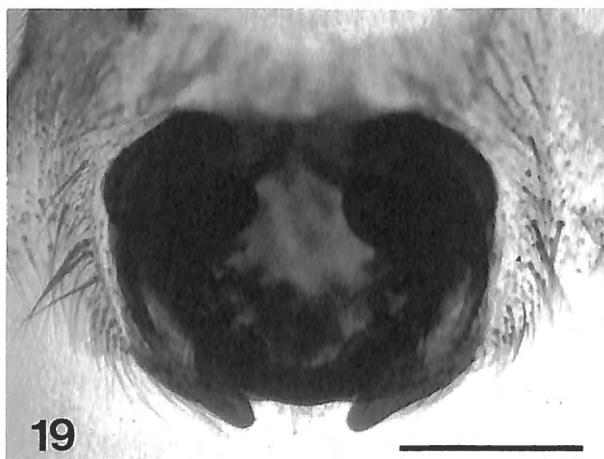
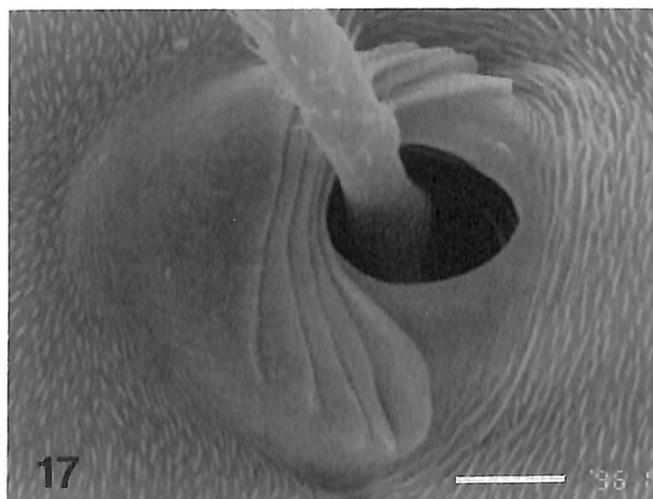
tibial apophysis (figs 12, 13) with broad base and narrow, sharp, procurved distal part, and by the median apophysis which is much larger in the back than in front; the terminal apophysis is membranous.

Females are recognized by the rounded epigyne plate and the fairly large spermathecae situated a little behind the centre of the epigyne (figs 14, 15).

Description

Male holotype. total length 9.6; carapace 4.5 long, 4.0 wide.

Colour. carapace pale yellow with faint grey pattern, in centre and along margin, with wide, pale, interrupted band in between. Abdomen pale yellow with pale brown pattern on dorsum: the central pale band with sinuous sides has two longitudinal pale brown stripes in the anterior half; sides mottled with brown: venter pale yellow with dark spot in front of spinnerets. Eyes: Diameter AME: 0.30; ALE: 0.20; PME: 0.38; PLE: 0.38; distance AME-AME: 0.16; AME-ALE: 0.36; ALE-PLE: 0.18; PME-PME: 0.20; PME-PLE: 0.28. MOQ: AW = 0.79 PW; AW = 0.95 L.



Figs. 17-20. – 17-19. *Petaloctenus bossema* n. sp. 17. Bothrium, female Mt of leg 2. 18-19. Epigyne. 18. Ventral view. 19. Dorsal view, cleared. 20. *Petaloctenus songan* n. sp. Epigyne, cleared, dorsal view. Scale lines: 17 0.005 mm; 18 0.1 mm; 19-20 0.5 mm.

Legs.

Spination.

	F	P	T	Mt
I	pl2d3r4	pl1r1	pl1d2r2v10**	pl3r3v6**t2
II	pl3d3r4	pl1r1	pl1d3r2v10**	pl3r3v6**t2
III	pl4d3r4	pl1r1	pl2d3r3v4**t2	disp12 vt2
IV	pl3d2r4	pl1r1	pl4d3r2v4**t2	disp10 vt2

Measurements.

	F	P+T	Mt	ta	Tot
I	5.7	8.4	6.0	2.1	22.2
II	4.9	7.7	5.1	1.7	19.4
III	4.1	5.2	4.2	1.4	14.9
IV	5.7	7.0	8.0	1.7	22.4

Male palp (figs 12, 13). Tibia large, prolateral apophysis with broad base narrowing to sharp procurved tip. Inferior anterior margin surrounding swelling of posterior cymbial extension which also has a dorsal swelling. Median apophysis broad at base, narrowed to rounded tip. Embolus slightly widened near extremity. Terminal apophysis membranous.

Female (MRAC 202.619). Total length 11.5; carapace 5.0 long, 3.9 wide.

Colour. as in male but dorsal abdominal pattern less clear.

Eyes . diameter AME: 0.30; ALE: 0.20; PME: 0.38; PLE: 0.36; distance AME-AME: 0.20; AME-ALE: 0.32; ALE-PLA: 0.18; PME-PME: 0.24; PME-PLA: 0.30. MOQ: AW = 0.79 PW; AW = 0.88 L.

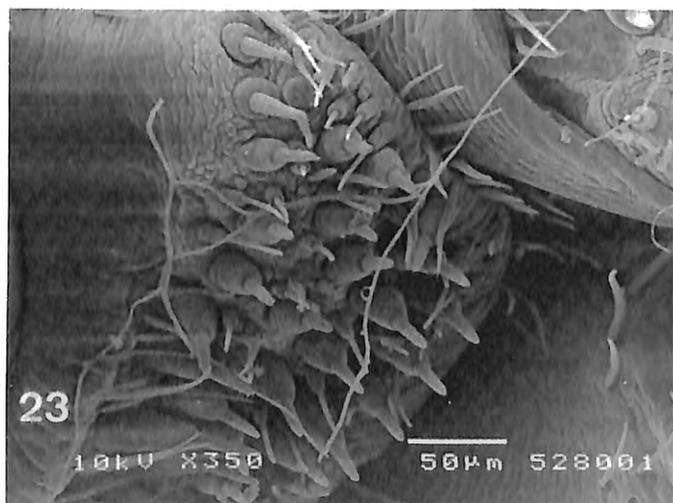
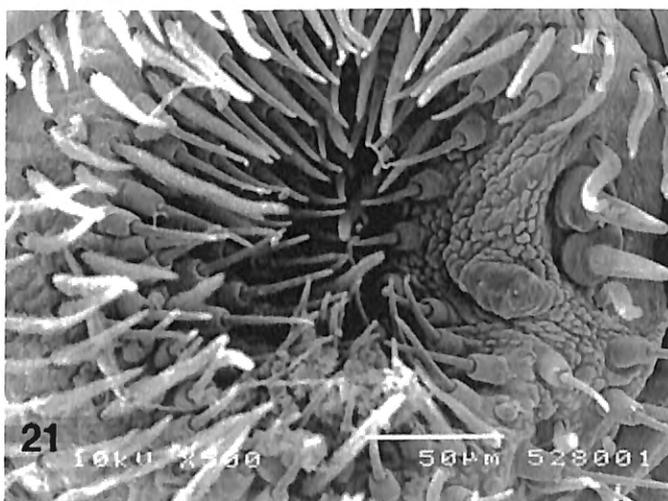
Legs.

Spination.

	F	P	T	Mt
I	pl3d3r3	-	v10**	v6**
II	pl3d3r4	-	pl1v10**	v6**
III	pl4d3r3	pl1r1	pl2d3r2v4**t2	disp12 vt2
IV	pl3d3r2	pl1r1	pl2d3r2v4**t2	disp12 vt2

Measurements.

	F	P+T	Mt	ta	Tot
I	4.7	6.6	3.9	1.5	16.7
II	4.4	6.0	3.6	1.4	15.4
III	3.5	4.4	3.5	1.2	12.6
IV	5.0	5.9	6.2	1.6	18.6



Figs. 21-24. – *Petalotenus bossema* n. sp. 21. AS female. 22. AS male. 23. MS female. 24. PS female. Scale lines: 0.05 mm.

Epigyne (figs 14-15, 20). With a well delimited, almost round plate, anterior margin slightly indented. Entrance openings in front; copulatory ducts sinuous; spermathecae almost round, fairly large, just behind the centre; fertilization ducts directed backwards.

Distribution

The species is only known from the type locality.

Etymology

The specific name is a noun in apposition derived from the name of the forest in which the type series was collected.

***Petaloctenus clathratus* (Thorell) new combination (fig. 16)**

Ctenus clathratus Thorell 1900: 79 (descr. ♀); Benoit 1980: 113 (descr. ♀).

Genus? clathratus, Des Arts 1912: 215 (removed from *Ctenus*).

Type material. Female holotype. Cameroon (no further locality) Sjöstedt 1891 (RMS 1295, examined).

Other material. None.

Diagnosis. Females are easily recognized by the epigyne plate which has a roughly triangular shape with a slightly concave anterior margin (fig. 16).

Description. Female holotype. total length 11.8; carapace 5.4 long, 4.1 wide.

Colour. Slightly bleached; very similar to colour pattern of the female of *P. songan*.

Eyes . diameter AME: 0.32; ALE: 0.22; PME: 0.36; PLE: 0.32; distance AME-AME: 0.16; AME-ALE: 0.38; ALE-PL: 0.18; PME-PME: 0.26; PME-PL: 0.32. MOQ: AW = 0.81 PW; AW = 0.93 L.

Legs.

Spination.

	F	P	T	Mt
I	pl3d3rl3	-	v10**	v6**
II	pl4d3rl3	-	pl1v10**	v6**
III	pl4d3rl3	pl1rl1	pl2d3rl2v4**t2	disp12 vt2
IV	pl3d3rl2	pl1rl1	pl2d3rl2v4**t2	disp12 vt2

Remarkably similar to the spination of the other female *Petaloctenus*.

Measurements.

	F	P+T	Mt	ta	Tot
I	5.1	7.4	4.7	1.6	18.8
II	4.9	6.1	4.2	1.5	16.7
III	4.3	4.9	4.1	1.4	14.7
IV	5.1	6.3	7.3	2.0	20.7

Epigyne (fig. 16). With a well delimited, roughly triangular plate; anterior margin slightly concave.

Distribution. The species is only known from the type locality.

Affinities and Discussion

7 genera are presently recognized from continental Africa: *Africactenus* Hyatt, *Anahita* Karsch, *Caloctenus* Keyserling, *Ctenus* Walckenaer, *Leptoctenus* L. Koch, *Pseudoctenus* Caporiacco and *Trogloctenus* Lessert. Although not all their African species have been officially transferred, the genera *Leptoctenus* and *Caloctenus* should no longer be considered African. The type species of the former, *Leptoctenus agalenooides* C. Koch (examined), is Australian. The male, in which the carapace is strongly narrowed, has a peculiar and unique, long, filiform embolus never found in any of the known African taxa. It is doubtlessly related to *Anahita* with which it shares the shape of the carapace and the absence of a retrolateral tibial apophysis on the male palp. *Leptoctenus* have therefore been transferred to *Anahita* or *Ctenus* although it is likely that the latter genus (type species from South America to be redescribed) does not occur in Africa either. African *Caloctenus*, of which the type species is Neotropical, were correctly placed in *Africactenus* (Benoit, 1974). The type species *Caloctenus aculeatus* Keyserling (1876) is clearly not congeneric with *Petaloctenus* in view of some somatic characters (cephalic part higher than thoracic part, anterior tibiae with seven pairs of spines) as well as of the epigyne which is clearly not covered by a solid plate. *Pseudoctenus* remains enigmatic as it is only known by a single female from Kenya (CAPORIACCO, 1949). Its description does certainly not match the characters of the new taxon erected here as the drawing of the epigyne shows a complex structure and not a well delimited solid plate.

Africactenus and *Anahita* both lack a terminal last pair of spines on tibia I and II. *Anahita* further differs by the presence of only 3 teeth on the inner margin of the chelicerae and more importantly by the absence of an apophysis on the male palpal tibia and by the presence of two membranous, most often rounded, areas on the epigyne. The genus is the sole representative of the subfamily Calocteninae on the African continent but another genus, *Apolania* Simon 1897, occurs on Madagascar. It is supposed to be closely related to *Anahita* (BENOIT, 1978) but may differ in particular somatic characters such as the length/width ratio of the carapace ($L \approx W$) and the size of the eyes (AME of similar size of ALE).

Among the Cteninae which have a terminal spine on tibia I and II, *Trogloctenus* has been characterized on the base of its small eyes. *Thoriossa* Simon, only known from the islands Annobon and Sao Thome, is characterized by the very low clypeus; it has a typical epigyne with a wide, swollen plate. The median apophysis in the rounded male palp is remarkably small and inserted on the tegulum which is largely membranous.

In *Ctenus*, the anterior tibiae always have a terminal pair

of spines; the male palp may have a large tibial apophysis but it is not pointing outwards, the cymbium may be modified at the base but is not extended behind the bulbus and the terminal apophysis is membranous. The majority of the *Ctenus* species have an epigyne in which at least the front is depressed and less strongly sclerotized. Exceptions are *Ctenus pilosus* and some species around it, which probably also belong in yet another genus, characterized by the long scopulae on the legs of the male. However, in these species the epigyne is never a sharply delimited solid plate but has at least the anterior margin smoothly merging with the surrounding membranous tegument.

Africactenus is considered a member of the Acantheinae on the base of the dip in the profile of the cephalothorax and the presence of hair tufts on the abdomen; it further lacks a terminal pair of spines on the tibia. For this reason *Petaloctenus* must be considered as closely related to *Africactenus*: it also lacks the terminal tibial spines and the dorsal profile of the cephalothorax is very slightly concave. However, the lowest point of this depression is near the posterior end of the fovea whereas it is just in front of the fovea in *Africactenus*. It has no real abdominal hair tufts but the type species has pairs of white hairs on the dorsum of the abdomen which may be homologous with the hair tufts in *Africactenus* which also often consist of only a few hairs. The main difference with *Petaloctenus* is the structure of the epigyne and the shape and size of the median apophysis. Members of the latter genus also have much shorter legs (P+TI/carapace width 1.7-2.1 in *Petaloctenus*, 2.3-3.0 in *Africactenus*).

On the base of these data we can provide a

Key to the genera of African Ctenidae

1. Cephalothorax with a group of converging hairs originating from between PME; male palpal tibia without retrolateral apophysis; epigyne with membranous areas, often rounded in shape *Anahita*
 - Cephalothorax without converging hairs between PME at the most with a cluster of parallel hairs; male palpal tibia with retrolateral tibial apophysis; epigyne with solid plate or otherwise different 2
- 2(1). Tibia I and II with a terminal pair of spines . 3
 - Tibia I and II without a terminal pair of spines 5
- 3(2). Eyes very small, hardly developed, clypeus more than 5 times as high as the diameter of an AME *Trogloctenus*
 - Eyes of average size with clypeus as high as the diameter of an ALE or less 4
- 4(3). Clypeus less high than the diameter of an AME; bulbus of male palp rounded; base of cymbium with strong horn; epigyne strongly bulging, much wider than long *Thoriosa*
 - Clypeus about as high as the diameter of an

AME; male palp rarely rounded or with horned cymbium; epigyne rarely wider than long

- *Ctenus*
- 5(2). Cephalothorax with deep indentation, deepest point in front of fovea; legs long: length of P+T I more than 2.1 times carapace width (adults); dorsum of abdomen with well developed hair tufts *Africactenus*
 - Dorsal profile of cephalothorax straight or shallowly indented with deepest point near posterior end of fovea; legs shorter: length of P+T I 2.1 times carapace width or less; hair tufts absent or poorly developed 5
- 6(5). Retromargin of chelicerae with 4 teeth; cymbium of male palp with modified basis; epigyne a solid plate *Petaloctenus*
 - Retromargin of chelicerae with 3 teeth; cymbium of male palp not modified (female unknown) *Apolania*

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