8.5. Family Megachilidae

The Megachilidae are long-tongued bees in which the non-parasitic species have the scopa under the metasoma. The male tergum 7 is often not visible from above. They are commonly called the leaf-cutter bees; but in reality the family comprises almost every type of nest building behaviour: leaf-cutters, daubers, carpenters, carders and soil nesters. The genera of the Osmiini and Anthidiini are notoriously difficult to separate. Especially the males are problematic and not all specimens can be assigned to a genus using this simplified key. Thus, Michener (2007) should be consulted for additional information.

Key to the Megachilidae

1. Three submarginal cells . . . . . ***Fidelia***
1'. Two submarginal cells **2**

2. Pygidial plate present . . . . . ***Lithurgus***
2'. Pygidial plate absent **3**

3. Metanotum with median spine . . . . . ***Aglaoapis***
3'. Metanotum without median spine **4**

4. Pterostigma over twice as long as broad **5**
4'. Pterostigma less than twice as long as broad (Anthidiini) (females only) Note: identification of male Anthidiini is very difficult and, thus, they are omitted here. Consult Michener (2007) for further information **28**

5. Arolium absent at least on hind leg (Megachilini) **6**
5'. Arolium present on all legs (Osmiini) **7**

6. Metasoma rounded distally, often toothed in males but always curled under . . . . . ***Megachile***
6'. Metasoma pointed distally, bifurcate in males, not curled under . . . . . ***Coelioxys***

7. Males, 13 antennal segments **8**
7'. Females, 12 antennal segments **17**

8. Tergum 7 weakly sclerotized and invisibile, hidden by tergum 6 . . . . . **9**
8'. Tergum 7 strongly sclerotized and visible **11**

9. Scutellum with transverse apical carina . . . . . ***Noteriades***
9'. Scutellum without carina **10**

10. Metanotum well below level of most of scutellum . . . . . ***Wainia***
10'. Metanotum medially about on same level as most of scutellum . . . . . ***Heriades***

11. T6 with transverse preapical carina **12**
11'. T6 without transverse preapical carina **13**

12. Preapical carina of tergum 6 smooth . . . . . ***Othinosmia***
12'. Preapical carina of tergum 6 crenulate or spined . . . . . ***Stenoheriades***

13. Tergum 7 about quadrate, sometimes with apical processes, and placed in a large emargination in tergum 6 . . . . . **14**
13'. Tergum 7 not quadrate and not placed in emargination in tergum 6 . . . **15**

14. S3 with median apical spike . . . . . ***Pseudoheriades***
14'. S3 without median apical spike . . . . . ***Afroheriades***

15. Scutum elongate, at least as long as width of intertegular distance . . . . . ***Ochreriades***
15'. Scutum not elongate, shorter than width of intertegular distance **16**

16. Tergum 7 broad and truncate, bulging dorsally . . . . . ***Haetosmia***
16'. Tergum 7 different, if broad and truncate then not bulging dorsally . . . . . ***Hoplitis***

17. Ridge on posterolateral corner of scutellum with marginal ridge not carinate, its lateral surface with long, dense pubescence . . . . . ***Afroheriades***
17'. Ridge of posterolateral corner of scutellum strongly carinate, its lateral surface naked **18**

18. Scutum elongate, at least as long as width of intertegular distance . . . . . ***Ochreriades***
18'. Scutum not elongate, shorter than width of intertegular distance **19**

19. Mesopleuron elongate, ventrally about as long as scutum **20**
19'. Mesopleuron not elongate, ventrally much shorter than scutum **23**

20. Clypeus with strong longitudinal carina . . . . . ***Noteriades***
20'. Clypeus without strong longitudinal carina **21**

21. Hypostomal area with fringe of long curled hair laterally . . . . . ***Pseudoheriades***
21'. Hypostomal area without fringe **22**

22. Mouthparts long, in repose, exceeding proboscial fossa . . . . . ***Stenoheriades***
22'. Mouthparts short, in repose, hardly exceeding proboscial fossa . . . . . ***Heriades***

23. Labrum with tuft of erect hair . . . . . ***Othinosmia* (part)**
23'. Labrum without tuft of erect hair or with marginal fringe **24**

24. Axilla angulate . . . . . ***Othinosmia* (part)**
24'. Axilla rounded **25**

25. Labrum with fringe of hairs **26**
25'. Labrum without fringe **27**

26. Posterior lateral angle of scutum either right-angular or acutely angled . . . . . ***Wainia* (part)**
26'. Posterior lateral angle of scutum obtusely angled . . . . . ***Hoplitis***

27. Tergum 6 with preapical carina . . . . . ***Haetosmia***
27'. Tergum 6 without preapical carina . . . . . ***Wainia* (part)**

28. Female mandible with 5-18 teeth separated by acute notches **29**
28'. Female mandible with 3-4 teeth, if 5-10 teeth then teeth separated by rounded notches **36**

29. Tergum 5 with posterior margin depressed and more finely punctate than rest of tergum **30**
29'. Tergum 5 with posterior margin not depressed, or if depressed then punctures same as rest of tergum **31**

30. Posterior margin of tergum 6 denticulate . . . . . .***Afranthidium*** **(part)**
30'. Posterior margin of tergum 6 not denticulate . . . . . ***Anthidium***

31. Vein 1m-cu joins first submarginal cell . . . . . .***Serapista***
31'. Vein 1m-cu joins second submarginal cell **32**

32. Basal part of propodeum hairless and black . . . . . ***Anthidioma***
32'. Basal part of propodeum hairy, usually with yellow maculation **33**

33. Preoccipital ridge and omaulus lamellate . . . . . .***Pachyanthidium*** **(part)**
33'. Preoccipital ridge and omaulus rounded or mostly carinate **34**

34. Subantennal suture distinctly arcurate outwards . . . . .***Pseudoanthidium***
34'. Subantennal suture straight or slightly arcurate **35**

35. Female mandible with 13-14 teeth . . . . . ***Gnathanthidium***
35'. Female mandible with 8 teeth or fewer . . . . . ***Afranthidium*** **(part)**

36. Basal vein of forewing curved; female hind leg with scopa-like hairs . . . . . ***Aspidosmia***
36'. Basal vein of forewing about straight; female hind leg with short hairs **37**

37. Omaular lamella continued over venter of thorax and separated from middle coxa by less than width of middle trochanter **38**
37'. Omaulus not lamellate, or if lamellate then distance of lamella to middle coxa at least as wide as width of middle trochanter **39**

38. Preoccipital ridge dorsally rounded or with low carina . . . . . ***Anthidiellum*** **(part)**
38'. Preoccipital ridge behind vertex lamellate . . . . . ***Pachyanthidium*** **(part)**

39. Axilla pointed posteriorly, scopa present . . . . . .***Icteranthidium***
39'. Axilla not pointed posteriorly, or if pointed than scopa absent **40**

40. Face with three longitudinal ridges . . . . . .***Euaspis***
40'. Face with only one or without longitudinal ridges **41**

41. Vein cu-a of hind wing usually half as long as second absissa of M+Cu . . . . . ***Trachusa***
41'. Vein cu-a of hind wing less than half as long as second absissa of M+Cu **42**

42. Arolium absent (parasitic) . . . . . ***Larinostelis***
42'. Arolium present **43**

43. Scopa absent (parasitic) **44**

43'. Scopa present **46**

44. Tegula of normal size . . . . . ***Stelis***
44'. Tegula enlarged **45**

45. Body black, without yellow markings . . . . . ***Afrostelis***
45'. Body with yellow markings (endemic to Sokotra) . . . . . ***Xenostelis***

46. Juxtantennal carina present, sometimes weakly developed . . . . . ***Eoanthidium***
46'. Juxtantennal carina absent **47**

47. Scutoscutellar suture usually open and shiny, medially divided into two parts; if closed subantennal suture strongly arcurate outward . . . . . ***Anthidiellum* (part)**
47'. Scutoscutellar suture usually closed, if open and shiny then not divided **48**

48. Body length 8.5 mm or less, metasoma with continuous yellow bands . . . . . ***Cyphanthidium***
48'. Body length usually greater than 8.5 mm, or if less then metasoma without yellow or with broken yellow bands . . . . . ***Plesianthidium***

8.5.1. Subfamily Fideliinae

8.5.1.1. Tribe Fideliini

Genus *Fidelia* Friese (Fig. 25A-B)

The Fideliinae is unique in the Megachilidae in that it has three submarginal cells in the forewing. Females have the scopa under the metasoma. Males have large projections on the seventh metasomal tergum. It comprises one genus, *Fidelia*, which is endemic to Africa. One species, however, occurs in the Palaearctic Region of Africa. They are all pollen collecting bees.

Key to the subgenera of *Fidelia*

1. Mandible bidentate, teeth acutely pointed . . . . . ***Fidelia* (*Fideliopsis*)**
1'. Mandible, broadly bilobate, with large apical tooth and small subapical tooth or simple **2**

2. Marginal cells not extending beyond apex of third submarginal cell . . . . . ***Fidelia* (*Fidelia*)**
2' Marginal cells extending beyond apex of third submarginal cell **3**

3. Marginal cells about as long as combined length of second and third submarginal cells . . . . . ***Fidelia* (*Fideliana*)**
3' Marginal cells longer than combined length of second and third submarginal cells . . . . . ***Fidelia* (*Parafidelia*)**

Subgenus *Fidelia* (*Fidelia*) Friese

This subgenus occurs in South Africa and Namibia.

Subgenus *Fidelia* (*Fideliana*) Michener

Fidelia (*Fideliana*) occurs in southern Africa and Morocco.

Subgenus *Fidelia* (*Fideliopsis*) Engel

This subgenus is recorded from South Africa and Namibia, and there exists an unpublished record from South-West Angola.

Subgenus *Fidelia* (*Parafidelia*) Brauns

This subgenus occurs in South Africa, Namibia and Botswana.

8.5.2. Subfamily Megachilinae

The Megachilinae comprises five tribes: Lithurgini, Osmiini, Anthidiini, Dioxyini and Megachilini, and they all occur in the Afrotropical Region. They all have two submarginal cells in the forewing, and the female pollen collectors have the scopa on the metasomal sterna. Males and cleptoparasitic species are more difficult to identify.

8.5.2.1. Tribe Lithurgini

Genus *Lithurgus* Berthold (Fig. 25C-D)

Subgenus *Lithurgus* (*Lithurgus*) Berthold

This tribe comprises the stone bees, so names because of their flat appearance. They are pollen collecting bees that build nests in dead wood. The Lithurgini have a pygidial plate, which is unique among the Megachilinae. There is one Afrotropical genus, *Lithurgus*, which has two subgenera of which only one occurs in Africa.

8.5.2.2. Tribe Osmiini

The Osmiini have arolia on all legs, which separates them from Anthidiini and most *Megachile*; *Megachile (Heriadopsis*) has arolia on the fore and middle legs. However, they are mostly small bees with white crossbands on the metasomal dorsum and the scopa under the metasoma, in females, or the metasoma curled under posteriorly, in males. They are difficult to identify to genus, except *Hoplitis*, which is comparatively large. This tribe comprises ten genera: *Afroheriades, Haetosmia*, *Heriades, Hoplitis, Noteriades, Ochreriades, Othinosmia, Pseudoheriades, Stenoheriades* and *Wainia.* They burrow in the ground, make aerial nests out of mud or resin and nests in hollow sticks. The genera and subgenera are often difficult to separate and Michener (2007) should be consulted for additional information.

Genus *Afroheriades* Peters (Fig. 26A-B)

This genus of minute to small bees is endemic to South Africa. They are pollen collecting bees.

Genus *Haetosmia* Popov (Fig. 26C-D)

This genus of pollen collecting bees is known from Kenya but is widespread from Central Asia through Saharan Africa to the Canary Islands. It most likely also occurs in North-East Africa.

Genus *Heriades* Spinola (Fig. 26E-F)

With at least 97 species, *Heriades* is by far the biggest osmiine genus in Africa. They are pollen collecting bees.

Key to the subgenera of *Heriades*

Males

1. Sternum 1 produced apically, with brush of fine hair under distal margin **2**
1'. Sternum 1 neither produced apically, nor with brush of fine hair **5**

2. Mandible with two teeth . . . . . ***Heriades* (*Michenerella*)**
2'. Mandible with three teeth. **3**

3. Sternum 2 without distal fringe . . . . . ***Heriades* (*Pachyheriades*)**
3'. Sternum 2 with distinct distal fringe **4**

4. Tergum 6 with distinct, longitudinal crest abruptly terminated in a V-shaped, flattened apical area . . . . . ***Heriades* (*Toxeriades*)**
4'. Tergum 6 without longitudinal crest . . . . . ***Heriades* (*Tyttheriades*)**

5. With pair of juxta antennal carinae . . . . . ***Heriades* (*Amboheriades*)**
5'. Without juxta antennal carinae . . . . . ***Heriades* (*Heriades*)**

Females

1. With pair of juxta antennal carinae . . . . . ***Heriades* (*Amboheriades*)**
1'. Without juxta antennal carinae **2**

2. Lateral line of tergum 1 short and not reaching spiracle . . . . . ***Heriades* (*Heriades*)**
2'. Lateral line of tergum 1 longer, reaching spiracle **3**

3. Fore tibia with patch of felt-like hair on inner surface . . . . . ***Heriades* (*Michenerella*) (part)**
3'. Fore tibia without patch of felt-like hair on inner surface **4**

4. Basal zone of propodeum about horizontal, with distinct carina posteriorly **5**
4'. Basal zone of propodeum sloping, without or with only weakly developed carina posteriorly **6**

5. Scutum anteriorly with transverse crest of dense, plumose hair . . . . . ***Heriades* (*Michenerella*) (part)**

5'. Scutum anteriorly without transverse crest of dense, plumose hair . . . . . ***Heriades* (*Pachyheriades*)**

6. Margin of clypeus excavated, base of labrum visible . . . . . ***Heriades* (*Toxeriades*)**

6'. Margin of clypeus about straight or denticulate, overhanging base of labrum . . . . . ***Heriades* (*Tyttheriades*)**

Subgenus *Heriades* (*Amboheriades*) Griswold

This subgenus is widespread in Africa.

Subgenus *Heriades* (*Heriades*) Spinola

This subgenus is found throughout Africa and occurs in the whole of Europe, Central Asia and India.

Subgenus *Heriades* (*Michenerella*) Krombein

Heriades (Michenerella) occurs in the whole of Africa and is known from South-East Europe through to Japan and South-East Asia.

Subgenus *Heriades* (*Pachyheriades*) Griswold

This subgenus is found in tropical Africa and the subtropical eastern region of South Africa.

Subgenus *Heriades* (*Toxeriades*) Griswold

The subgenus *Heriades* (*Toxeriades*) is monotypic and the only species, *Heriades apricula* Griswold, is endemic to South Africa.

Subgenus *Heriades* (*Tyttheriades*) Griswold

Heriades (*Tyttheriades*) is endemic to southern Africa.

***Genus Hoplitis* Klug (Fig. 26G-H)**

Hoplitis seem to lack obvious diagnostic features. This is a large genus that is represented in the Afrotropical Region by two species, one in Kenya and the other along most of the eastern part of the Continent. A few Palaearctic species are recorded from Sudan, where the two regions meet. They are representatives of the subgenera *Hoplitis* (*Annosmia*) and *Hoplitis* (*Pentadentosmia*). Except for *Hoplitis* (*Bytinskia*) that appears to be cleptoparasitic, they are all pollen collecting bees.

Key to the subgenera of *Hoplitis*

1. Base of labrum obscured by closed mandibles and lower clypeus **2**

1'. Base of labrum visible between closed mandibles and lower clypeus . . **3**

2. Male tergum 7 bilobed; female tergum 1 with distinct angle separating anterior and dorsal surfaces . . . . . ***Hoplitis* (*Anthocopa*)**

2'. Male tergum 7 deeply trifid; female tergum 1 without distinct angle separating anterior and dorsal surfaces . . . . ***Hoplitis* (*Pentadentosmia*)**

3. Male tergum 7 shallowly emarginate; female mandible four-toothed, scopa reduced (cleptoparasite) . . . . . .***Hoplitis* (*Bytinskia*)**

3'. Male tergum 7 bidentate and deeply emarginate between teeth; female mandible three-toothed, scopa developed . . . . . .***Hoplitis* (*Annosmia*)**

Subgenus *Hoplitis* (*Annosmia*) Warncke

This subgenus is most diverse in the Mediterranean Basin and it also occurs in Sudan.

Subgenus *Hoplitis* (*Anthocopa*) Lepeletier & Serville

Hoplitis (*Anthocopa*) occurs in the southern Palaearctic and from East Africa to South Africa. The species of this subgenus are difficult to identify and there are many undescribed species.

Subgenus *Hoplitis* (*Bytinskia*) Mavromoustakis

One undescribed species is known from Kenya. Four other species occur in Turkey and Israel. The species of this subgenus seem to be cleptoparasites.

Subgenus *Hoplitis* (*Pentadentosmia*) Warncke

This subgenus is restricted to desert areas, from Saharan Africa to Central Asia and also occurs in Sudan.

Genus *Noteriades* Cockerell (Fig. 27A-B)

This genus is Old World and found throughout Africa. They are all pollen collecting bees.

Genus *Ochreriades* Mavromoustakis (Fig. 27C-D)

Ochreriades is unique in that it has pallid integumental markings and an enlarged pronotum. It has two species, one in the Palaearctic Region and the other in Namibia (*Ochreriades rozeni* Griswold). It is a pollen collecting bee.

Genus *Othinosomia* Michener (Fig. 27E-F)

The diagnostic features for this genus are a receding clypeus, exposing the base of the labrum in the female, and in the male a preapical transverse carina (not toothed) on tergum 6 and an exposed tergum 7. This genus is confined to sub-Saharan Africa, has three subgenera and 13 described species. They are pollen collecting bees.

Key to the subgenera of *Othinosomia*

1. Front tibia with apical spine long and curved posteriorly . . . . . .***Othinosmia* (*Othinosmia*)

1'. Front tibia with apical spine short and straight **2**

2. Axilla acutely angulate . . . . . .***Othinosmia* (*Afrosmia*)**
2'. Axilla rounded . . . . . ***Othinosmia* (*Megaloheriades*)**

Subgenus *Othinosomia* (*Afrosmia*) Griswold (Fig. 27A)

This subgenus has a single species, *Othinosmia stupenda* Griswold that is endemic to Kenya.

Subgenus *Othinosomia* (*Megaloheriades*) Peters

This subgenus occurs in South Africa and Namibia, and includes a number of undescribed species.

Subgenus *Othinosomia* (*Othinosmia*) Michener

Othinosmia s. str. occurs in South Africa and Namibia, and includes some undescribed species.

***Genus Pseudoheriades* Peters (Fig. 27B)**

Pseudoheriades resembles *Heriades*, differing in that the carina behind the basal zone of the propodeum does not extend laterally beyond the spiracle, and the male tergum 7 is exposed. This genus is Old World. They are pollen collecting bees.

Genus *Stenoheriades* Tkalců (Fig. 27C)

Stenoheriades resembles *Heriades*, differing in the long proboscis in the female and in the male by the combination of a preapical, transverse carina on tergum 6 (often toothed) and an exposed tergum 7. This genus occurs in Europe and Africa. They are pollen collecting bees.

Genus *Wainia* Tkalců (Fig. 27D)

Wainia resembles *Heriades*, except the male tergum 7 is completely invaginated. This small genus has three subgenera, with seven Afrotropical species and one Palaearctic species. They are pollen collecting bees.

Key to the subgenera of *Wainia*

1. All metasomal tergal with subapical cross-bands; male mandible three-toothed . . . . . .***Wainia* (*Wainia*)**
1'. Distal margins of T2-T4 with cross-bands; male mandible bidentate **2**

2. Omaular carina distinct . . . . . ***Wainia* (*Wainiella*)**
2'. Omaular carina absent . . . . . .***Wainia* (*Caposmia*)**

Subgenus *Wainia* (*Caposmia*) Peters

This subgenus, in Africa, is confined to South Africa where three species occur. One species is known from Israel.

Subgenus *Wainia* (*Wainia*) Tkalců

Wainia s. str. is widespread in southern and East Africa and known through South Asia to the Philippines.

Subgenus *Wainia* (*Wainiella*) Griswold

This subgenus has two species that occur in East and South Africa.

8.5.2.3. Tribe Anthidiini

Anthidiini mostly have pallid markings on the integument and a small pterostigma, which is less than twice as long as wide. These are the carder bees. They mostly use plant fibre in nest construction and mostly collect pollen; some species, however, are parasitic. The genera and subgenera, especially males, are often difficult to separate and Michener (2007) should be consulted for additional information.

Genus *Afranthidium* Michener (Fig. 29A-B)

Afranthidium has five or more mandibular teeth, no arolia and the male tergum 5 has the distal margin depressed and more finely punctate than the remainder of the tergum. In spite of its name, *Afranthidium* occurs in both the Afrotropical and Palaearctic regions. It is a large genus of pollen collecting bees with 11 subgenera.

Key to the subgenera of *Afranthidium*

1. Impunctate marginal zones of terga 2-5 transparent brown or cream-coloured . . . .***Afranthidium* (*Immanthidium*)**

1'. Marginal zones of terga 2-5 either punctate or if narrowly impunctate, impunctate part dark to translucent brown **2**

2. Scutellum rounded in profile, not or little overhanging metanotum **3**

2'. Scutellum acute angled or right-angled in profile, sometimes rounded, medially often strongly overhanging metanotum **7**

3. Terga 2-5 with apical hair bands, broken medially . . . . ***Afranthidium* (*Zosteranthidium*)**

3.' Terga 2-5 without apical hair bands **4**

4. Female hind basitarsus with apical projection over base of second tarsomere; male hind trochanter with apicoventral denticle . . . . ***Afranthidium* (*Nigranthidium*)**

4'. Female hind basitarsus with apex truncate; male hind trochanter without apicoventral denticle **5**

5. Female tergum 5 without lateral spine; male tergum 7 with two apical lobes, each lobe two to three times as broad as long . . . .***Afranthidium* (*Domanthidium*)**

5'. Female tergum 5 with lateral spine; male tergum 7 with three apical lobes or, if bi-lobed, each lobe about as long as broad **6**

6. Female mesepisternum covered with bristles, apically flattened, minutely barbed, blunt or abruptly tapered; male gonostylus tapered distally and as long as or only slightly longer than distal end of gonocoxite . . . . . .***Afranthidium* (*Oranthidium*)**

6'. Vestiture on female mesepisternum not modified; male gonostyly expanded apically, about twice as long as gonocoxite . . . . . ***Afranthidium* (*Afranthidium*)**

7. Female tergum 6 with preapical denticulate ridge, male unknown . . . . . .***Afranthidium* (*Xenanthidium*)**

7'. Female tergum 6 without preapical denticulate ridge **8**

8. Male tergum 6 preapical ridge usually denticulate, female tibiae not tuberculate on outer surface, coarsely punctate . . . . . .***Afranthidium* (*Capanthidium*)**

8'. Male tergum 6 without preapical denticulate ridge, female tibiae strongly tuberculate on outer surface **9**

9. Preoccipital carina present . . . . . .***Afranthidium* (*Mesanthidiellum*)**

9'. Preoccipital carina absent . . . . . .***Afranthidium* (*Branthidium*)**

Subgenus *Afranthidium* (*Afranthidium*) Michener

Afranthidium s. str.is endemic to South Africa and Namibia.

Subgenus *Afranthidium* (*Branthidium*) Pasteels

This subgenus occurs through much of the Afrotropical Region south of the equator.

Subgenus *Afranthidium* (*Capanthidium*) Pasteels

In the Afrotropical Region the subgenus *Capanthidium* is only known from the south-western region of southern Africa. However, it has a disjunct distribution and also occurs in a Morocco and Spain, which is a similar pattern to *Fidelia*.

Subgenus *Afranthidium* (*Domanthidium*) Pasteels

This subgenus is monotypic and the only species *Afranthidium abdominale* Friese occurs throughout South Africa.

Subgenus *Afranthidium* (*Immanthidium*) Pasteels

Afranthidium (*Immanthidium*) is widespread in East and southern Africa, but uncommon in the xeric areas of the Cape and Namibia.

Subgenus *Afranthidium* (*Mesanthidiellum*) Pasteels

This subgenus is widespread in Africa.

Subgenus *Afranthidium* (*Nigranthidium*) Pasteels

The subgenus *Afranthidium* (*Nigranthidium*) occurs in South Africa and Namibia.

Subgenus *Afranthidium* (*Oranthidium*) Pasteels

This subgenus only occurs in South Africa and Namibia.

Subgenus *Afranthidium* (*Xenanthidium*) Pasteels

This subgenus is monotypic with *Afranthidium biserratum* (Pasteels) being the only species, and it is endemic to Cameroon.

Subgenus *Afranthidium* (*Zosteranthidium*) Michener & Griswold

Afranthidium tergofasciatum (Pasteels) is its only species and it is endemic to western South Africa.

Genus *Afrostelis* Cockerell (Fig. 29B)

Afrostelis are small and black, have a large tegula and are devoid of a scopa. They are cleptoparasitic and occur throughout Africa south of the equator.

Genus *Anthidiellum* Cockerell (Fig. 29C)

In *Anthidiellum* the omaular carina is lamellate, as is the pronotal lobe and the scutellum. They have extensive yellow maculations and are pollen collecting bees. The genus has five subgenera that occur widely in the Old World, three of these occur in the Afrotropical Region.

Key to the subgenera of *Anthidiellum*

1. Terga 2-5 in females and terga 2-6 in males swollen laterally, appearing lobate from above . . . . **Anthidiellum (Anthidiellum)**

1'. Terga 2-5/6 not swollen laterally **2**

2. Preoccipital ridge absent behind vertex . . . . **Anthidiellum (Chloranthidiellum)**

2'. Preoccipital ridge present behind vertex . . . . **Anthidiellum (Pycnanthidium)**

Subgenus *Anthidiellum* (*Anthidiellum*) Cockerell

This subgenus is mostly Palaearctic, but also occurs in Ethiopia.

Subgenus *Anthidiellum* (*Chloranthidiellum*) Mavromoustakis

Anthidiellum flavescens (Friese) is the only species in this subgenus and it occurs in East Africa and Zimbabwe.

Subgenus *Anthidiellum* (*Pycnanthidium*) Krombein

This subgenus is widespread in the Old World.

Genus *Anthidioma* Pasteels (Fig. 29D)

Anthidioma lacks conspicuous diagnostic features; it has no maculation and no carinae or lamellae. It is a small genus of pollen collecting species; endemic to southern African, with two described species.

Genus *Anthidium* Fabricius (Fig. 30A-B)

Anthidium can be identified by a combination of characters: straight subantennal suture; female tergum 6 with an apically depressed rim, posteromedian notch and lateral tooth, on angle or on shoulder. The species in *Anthidium* are pollen collecting bees. The genus occurs through the Holarctic and is widely spread in Africa.

Key to the subgenera of *Anthidium*

1. Scutellum rounded in profile, not greatly overhanging metanotum and propodeum . . . . . ***Anthidium* (*Anthidium*)**
1'. Scutellum angulate in profile, greatly overhanging metanotum and propodeum **2**

2. Pronotal lobe carinate . . . . . ***Anthidium* (*Nivanthidium*)**
2'. Pronotal lobe lamellate . . . . . ***Anthidium* (*Severanthidium*)**

Subgenus *Anthidium* (*Anthidium*) Fabricius

Anthidium s. str. occurs on all continents, except Australia.

Subgenus *Anthidium* (*Nivanthidium*) Pasteels

Anthidium niveocinctum Gerstaecker is the only known species and it is endemic to South-East Africa.

Subgenus *Anthidium* (*Severanthidium*) Pasteels

This subgenus is widespread in the Afrotropical Region.

Genus *Aspidosmia* Brauns (Fig. 30C-D)

Aspidosmia is unique in that it has a scopa on the hind tibia, as well as a sternal scopa. They are generally more hairy than other anthidiine bees. It has two species that are endemic to South Africa. They are Pollen collecting bees restricted to western South Africa.

Genus *Cyphanthidium* Pasteels

Cyphanthidium closely resembles *Afranthidium,* differing in that the former has fewer than five mandibular teeth and the latter six or more teeth. It comprises pollen collecting bees. The genus has two described species and is endemic to southern Africa.