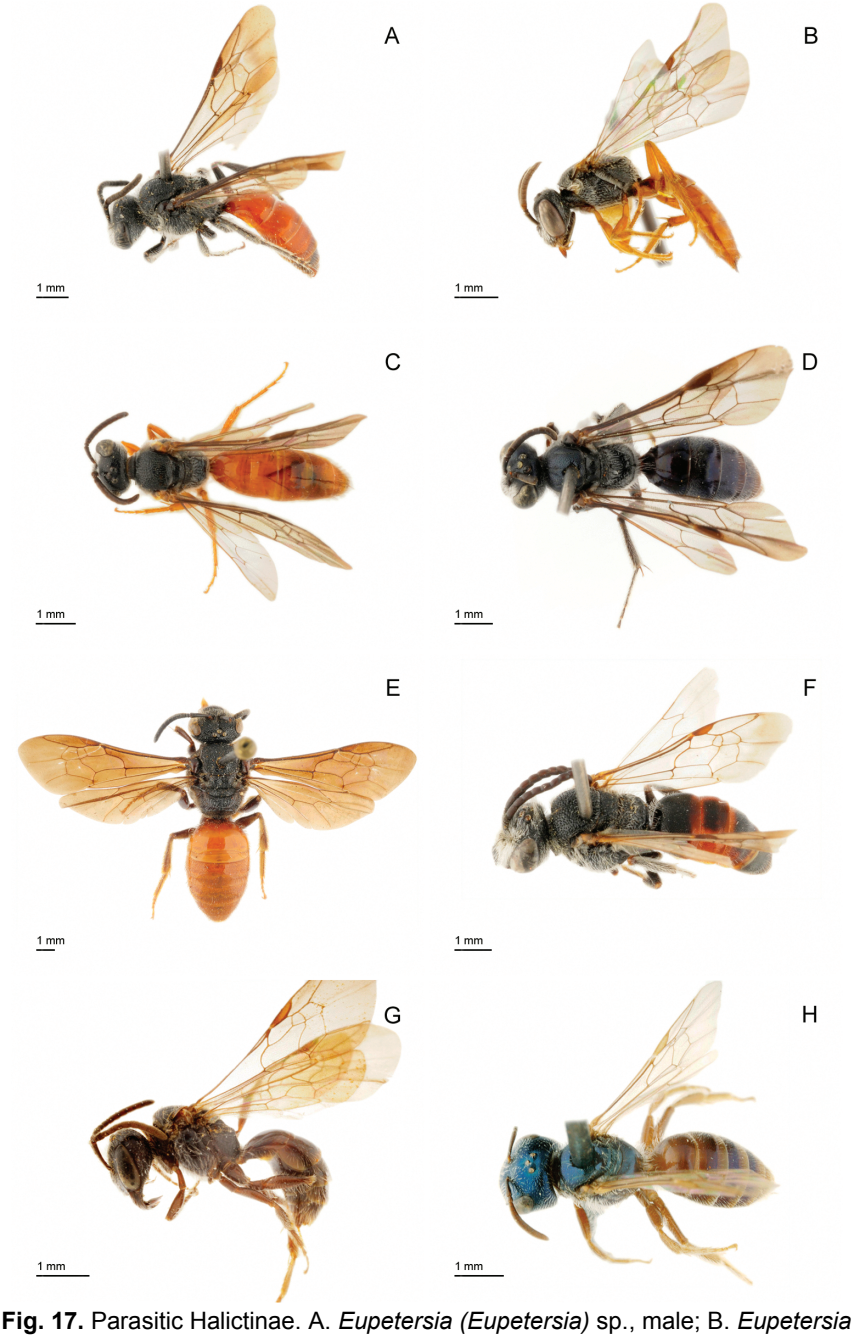

Fig. 17. Parasitic Halictinae. A. *Eupetersia (Eupetersia)* sp., male; B. *Eupetersia (Nesoeupetersia) emini*, male; C. *Eupetersia (Nesoeupetersia) emini*, female; D. *Eupetersia (Calleupetersia)* sp., female; E. *Sphecodes* sp., female; F. *Sphecodes* sp., male; *G. Lasioglossum (Paradialictus) synavei,* female; H. *Seladonia (Paraseladonia) chalybaea*, female.

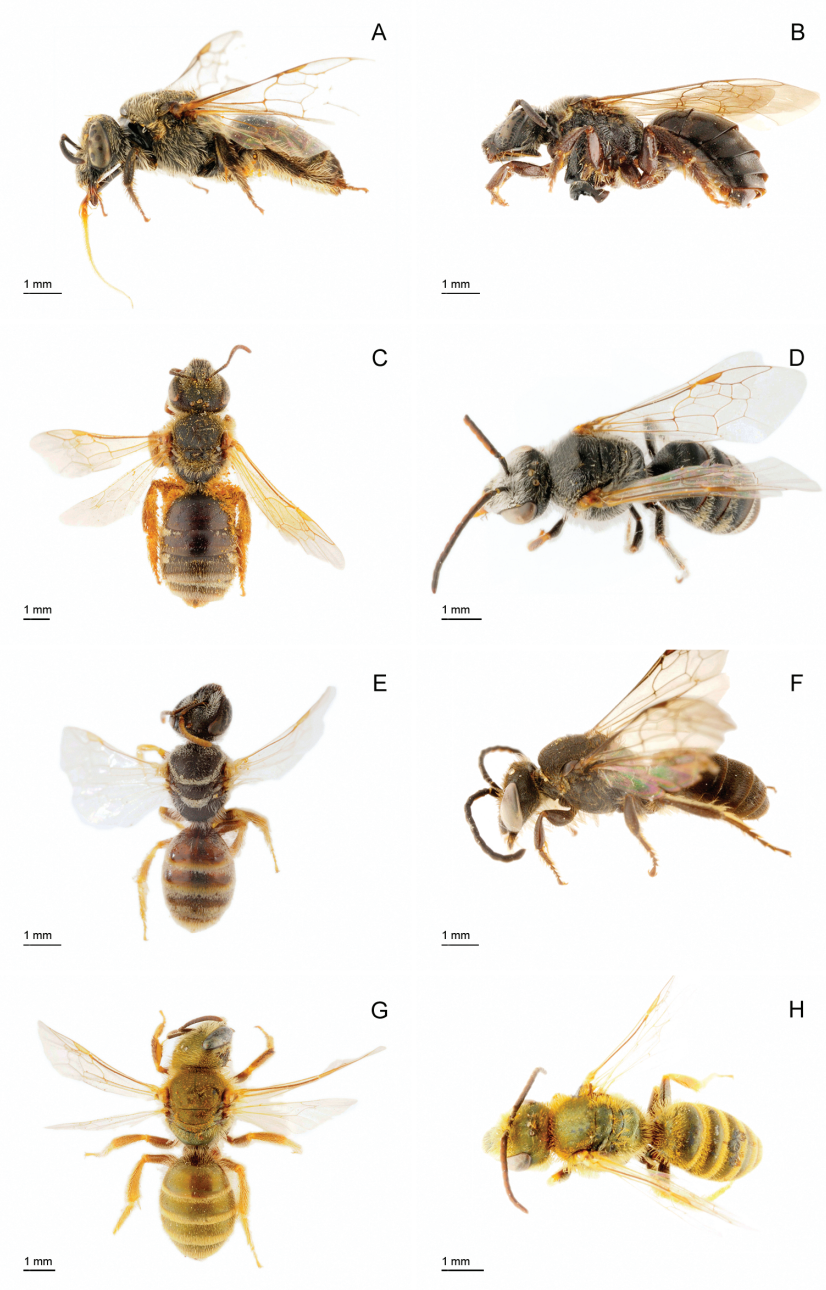

Fig. 18. A., *Lasioglossum (Ipomalictus)* sp., female; B, *Lasioglossum (Ipomalictus*) sp., male; C, *Lasioglossum (Rubrihalictus)* sp., female; D, *Lasioglossum (Rubrihalictus)* sp., male; E, *Lasioglossum (Ctenonomia)* sp., female; F, *Lasioglossum (Ctenonomia)* sp., male; G, *Seladonia jucunda*, female; H, *Seladonia jucunda*, male.

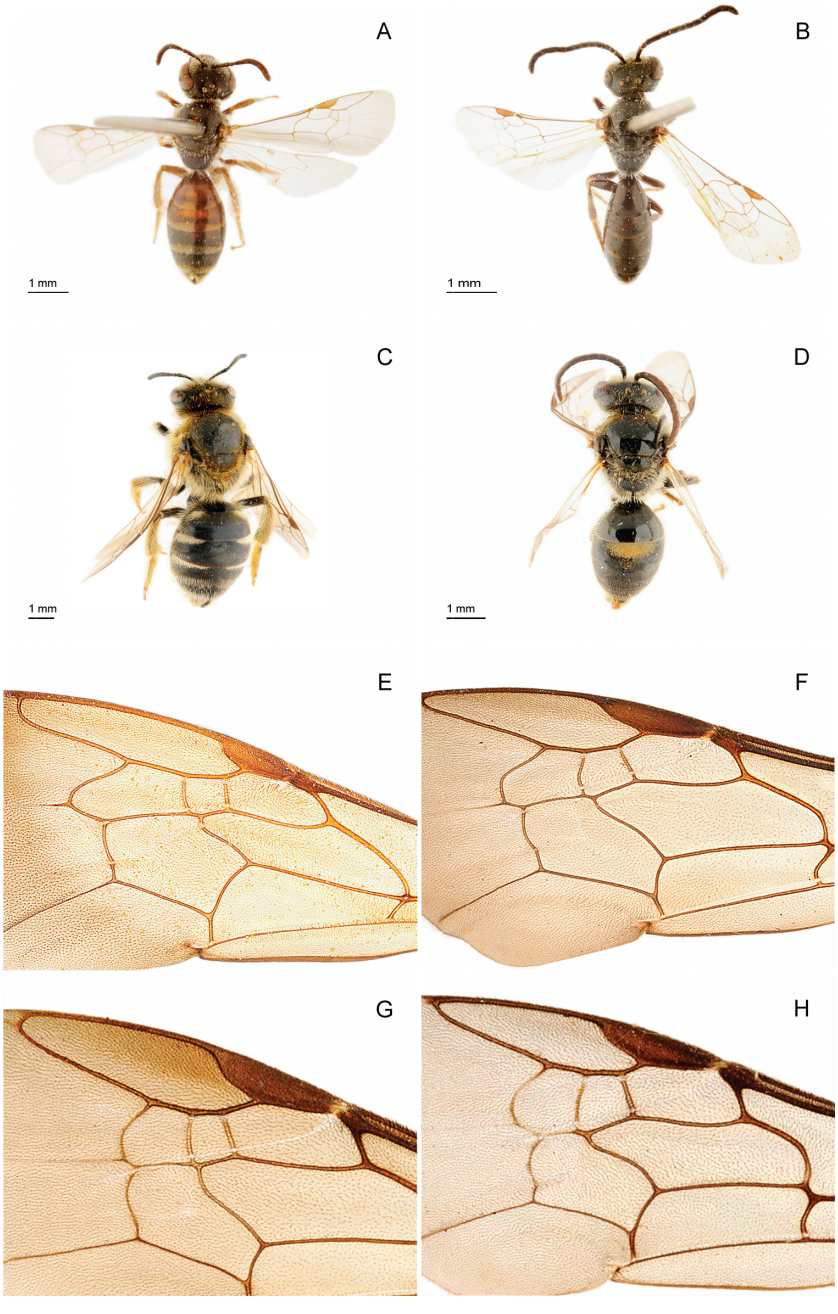

Fig. 19. A, *Lasioglossum (Afrodialictus)*, female; B. *Lasioglossum (Afrodialictus*), male; C. *Lasioglossum (Sellalictus) deceptum*, female; D. *Lasioglossum (Sellalictus)* sp., male; E. forewing of Nomiinae; F. forewing of *Patellapis (Zonalictus)* sp.; G. forewing of *Lasioglossum (Ipomalictus)* sp.; H, forewing of *Lasioglossum (Sellalictus*) sp.

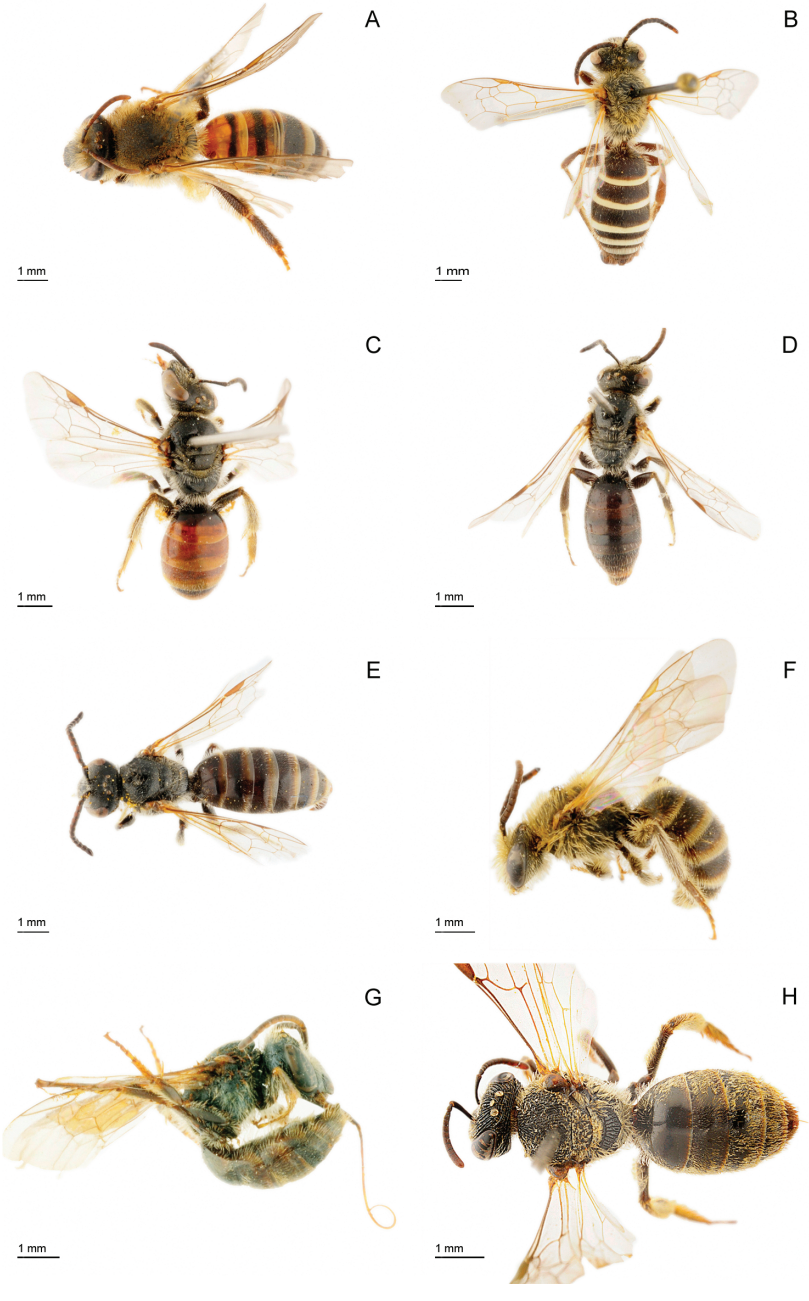

Fig. 20. A. *Patellapis (Zonalictus) kabetense*, female; B. *Patellapis (Zonalictus) albofasciata*, male; C. *Patellapis (Chaetalictus)* sp., female; D. *Patellapis (Chaetalictus)* sp., male; E. *Patellapis (Patellapis)* sp., male; F. *Patellapis (Lomatalictus)* sp., male; G. *Glossodialictus wittei*, male; H. *Patellapis (Dictyohalictus) plicatus*, female.

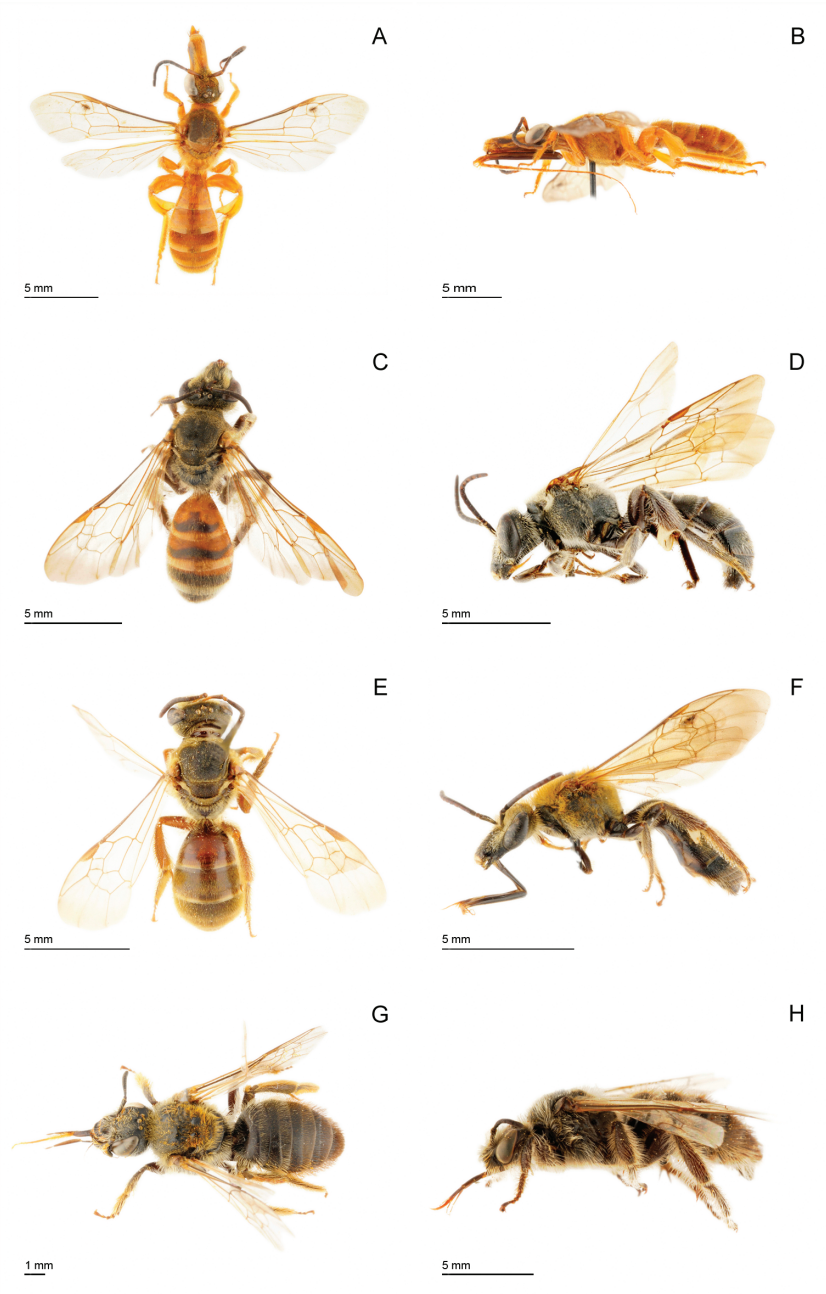

Fig. 21. A, *Thrinchostoma (Diagonozus) lettowvorbecki*, male; B. idem, lateral view; C. *Thrinchostoma (Eothrincostoma) torridum*, female; D. *Thrinchostoma (Eothrincostoma) torridum*, male; E. *Thrinchostoma (Thrinchostoma)* sp., female; F. *Thrinchostoma (Thrinchostoma) emini*, male; G. *Systropha* sp., female; H. *Systropha* sp., male.

8.4. Family Melittidae

The Melittidae are short-tongued bees with one subantennal suture, a pointed glossa and a straight basal vein in the forewing. Unlike all the other short-tongued bees they do not have one, clearly visible, unique feature. There are 10 genera, eight of which are endemic (*Capicola, Haplomelitta*, *Samba, Ceratomonia, Meganomia, Pseudophilanthus, Uromonia, Melitta*, *Rediviva, Redivivoides*) and these all have limited distributions. *Melitta* is the only genus that occurs outside the Region, through much of the Old World. In the Afrotropical Region it is confined to southern and East Africa. They are pollen collecting bees and probably all nest in the ground. The Melittidae are basal, and polyphyletic, in a cladogram on bee phylogeny (Danforth *et al*., 2006), suggesting all bees evolved from a melittid-like ancestor.

Key to the Melittidae

1. Two submarginal cells **2**
1'. Three submarginal cells **5**

2. Vertex convex, laterally above eyes . . . . . ***Capicola***
2'. Vertex about straight, weakly concave to weakly convex, laterally about level with upper eye edges **3**

3. Male clypeus yellow; female metasomal venter with fasciae of long, white, erect vestiture . . . . . ***Afrodasypoda***
3'. Male clypeus black; female metasomal venter without distinct fasciae . . **4**

4. Female with one hind tibial spur; male hind basitarsus with hairy patch basally on outer surface . . . . . ***Samba***
4'. Female with two hind tibial spurs; male hind basitarsus without hairy patch . . . . . ***Haplomelitta***

5. Integument mostly black, metasomal sometimes reddish **6**
5'. Integument with extensive yellow maculation **8**

6. Propodeal triangle dull . . . . . ***Melitta***
6'. Propodeal triangle shiny **7**

7. Scopa with densely plumose understory; male S7 deeply bifid or with two long, slender processes, lateral lobes naked . . . . . ***Rediviva***
7'. Scopa unmodified; male S7 weakly emarginate, lateral lobes with long, erect hairs . . . . . ***Redivivoides***

8. Aerolium absent . . . . . ***Meganomia***
8'. Aerolium present **9**

9. Ocelli distinctly in front of vertex, separated by two or more ocelli diameters . . . . . ***Pseudophilanthus***
9'. Ocelli about an ocellus diameter from vertex **10**

10. Glossa at least half as long as prementum; sterna 4-5 without stridulating areas; male flagellum not expanded apically . . . . . ***Uromonia***

10'. Glossa less than one-third as long as prementum; sublateral stridulating areas on sterna 4-5, but hidden under preceeding tergum; male flagellum expanded apically . . . . . .***Ceratomonia***

8.4.1. Subfamily Dasypodainae

These are small, mostly black bees with two submarginal cells; the first cell is shorter than the second. Three tribes occur in the Afrotropical Region; they are the Dasypodaini, Promelittini and the Sambini.

8.4.1.1. Tribe Dasypodaini

Genus *Capicola* Friese (Fig. 22A-B)

In the Dasypodaini the summit of the vertex is raised above the eyes and distinctly convex.

Capicola is closely related to the Northern Hemisphere *Hesperapis.* Michener (2007) treats *Capicola* as a subgenus of *Hesperapis*, but Michez et al (2007) considered it to be a distinct genus and the latter classification is followed here.

Key to the subgenera of *Capicola*

1. Outer surface of hind tibia with only slender pubescent scopal hairs; male S7 disc distinctly narrowed medially with densely hirsute, lateral lobes . . . . . .***Capicola (Capicola)***

1'. Outer surface of hind tibia with short, thick, blunt setae between pubescent scopal hairs; male sternum 7 disc slightly narrowed medially, without lateral lobes . . . . . .***Capicola (Capicoloides)***

Subgenus *Capicola (Capicola)* Friese

Capicola s. str. occurs in the xeric areas of southern Africa. There are 11 described species.

Subgenus *Capicola (Capicoloides)* Michener

Capicola (Capicoloides) is known from two species that occur in the arid areas of Namibia and South Africa.

8.4.1.2. Tribe Promelittini

Genus *Afrodasypoda* Engel (Fig. 22C)

This genus is monotypic with the only species *Afrodasypoda plumipes* (Friese) being endemic to western South Africa.

8.4.1.3. Tribe Sambini

Sambini has two Afrotropical genera. However, current research will probably result in their synonymy, making *Hapolomelitta* a junior synonym of *Samba*.

Genus *Haplomelitta* Cockerell (Fig. 22D-E)

There are five southern African, subgenera; namely *Atrosamba, Haplomelitta, Haplosamba, Metasamba* and *Prosamba*. Each subgenus has one described species, although all but *Haplomelitta* and *Haplosamba* have an undescribed species.

Key to the subgenera of *Haplomelitta*

1. Tergal hair bands well developed; female clypeus with small medio-longitudinal ridge; male hind leg with tibia swollen, basitarsus with pre-apical inner tooth . . . . . .***Haplomelitta* (*Metasamba*)**

1'. Without tergal hair bands; female clypeus flat; male hind leg neither swollen nor with pre-apical tooth on basitarsus **2**

2. Female mandible tridentate; male T1 red and propodeal triangle weakly differentiated, smooth basally . . . . . ***Haplomelitta* (*Haplosamba*)**

2'. Female mandible bidentate; male T1 black or red, if red then propodeal triangle strongly differentiated, rugose basally **3**

3. Propodeal triangle distinctly differentiated between anterior and posterior areas; male hind basitarsus inflated . . . . . ***Haplomelitta* (*Haplomelitta*)**

3'. Propodeal triangle weakly differentiated; male hind basitarsus narrower than tibia **4**

4. Second submarginal cell about as long as first . . . . . .***Haplomelitta* (*Atrosamba*)**

4'. Second submarginal cell distinctly shorter than first . . . . . ***Haplomelitta* (*Prosamba*)**

Subgenus *Haplomelitta* (*Atrosamba*) Michener

This subgenus has one South African species, although an undescribed species possibly also occurs in Namibia.

Subgenus *Haplomelitta* (*Haplomelitta*) Cockerell

Haplomelitta is monotypic and endemic to South Africa.

Subgenus *Haplomelitta* (*Haplosamba*) Michener

Haplosamba is monotypic and endemic to South Africa.

Subgenus *Haplomelitta* (*Metasamba*) Michener

This subgenus has one described species. It occurs in Namibia and the region of South Africa that is adjacent to the Namibian border.

Subgenus *Haplomelitta* (*Prosamba*) Michener

Samba (*Prosamba*) occurs in South Africa and is known from one described species.

Genus *Samba* Friese (Fig. 22F)

Samba s. str. has one described species, and one undescribed species is known. They both occur only in East Africa.

8.4.2. Subfamily Meganomiinae

The Meganominae have extensive yellow markings and three submarginal cells in the forewing. It is endemic to the Afrotropical Region (it occurs in Africa and Yemen). There are four genera: *Ceratomomia*, *Meganomia, Pseudophilanthus* and *Uromonia.*

Genus *Ceratomonia* Michener (Fig. 23A-B)

Ceratomonia has an arolium, the lateral ocelli are close to the posterior edge of the vertex and the male antenna is expended apically. The female has an ill defined basitibial plate. It is Namibian and monotypic.

Genus *Meganomia* Cockerell (Fig. 23C-D)

In *Meganomia* the arolium is absent, the lateral ocelli are not particularly close to the vertex and the male antennae are flattened distally. There are four Africa species (occurring from Kenya to northern South Africa and Namibia), and one from Yemen.

Genus *Pseudophilanthus* Alfken (Fig. 23E)

Subgenus *Pseudophilanthus* (*Pseudophilanthus*) Alfken

Only the nominative subgenus occurs in Africa, namely East Africa. The other is Madagascan, namely *Pseudophilanthus* (*Dicromonia*). *Pseudophilanthus* s. str. has an aerolium, the lateral ocelli are separated from the posterior edge of the vertex by more than an ocellar diameter and the male antenna is not modified.

Genus *Uromonia* Michener (Fig. 23F)

Subgenus *Uromonia* (*Uromonia*) Michener

Only the nominative subgenus occurs in Africa. It has one species that was described from Kenya and later caught in Mali (Pauly et al. 2001). The other subgenus is Madagascan, namely *Uromonia* (*Nesomonia*), and monotypic. *Uromonia* has an arolium, the ocelli are close to the posterior edge of the vertex and the male antenna is not modified. The female has an ill defined basitibial plate.

8.4.3. Subfamily Melittinae

The *Melittinae* have three submarginal cells in the forewing and are mostly black or black and brownish. There are four genera, three of which occur in the Afrotropical Region, namely *Melitta, Rediviva* and *Redivivoides*.

Genus *Melitta* Kirby

Subgenus *Melitta* (*Melitta*) Kirby (Fig. 24A-B)

Only *Melitta* s. str. occurs in sub-Saharan Africa. The propodeal triangle is dull and well developed, and the second submarginal cell of the forewing is usually wider than long, or as wide as long. There are eight African species, six occur in southern Africa and two in East Africa.

Genus *Rediviva* Friese (Fig. 24C-D)

In *Rediviva* the propodeal triangle is shiny and small, the second submarginal cell of the forewing is usually longer than wide and the scopa has dense plumose hairs under long simple bristles (unique). It is endemic to southern Africa and the females collect oil from flowers. There are 24 species in this genus

Genus *Redivivoides* Michener (Fig. 24E-F)

Redivivoides resembles *Rediviva*, except for the structure of the scopa, in the female, and the genitalia, in the male. It has one described species that is endemic to South Africa, although others await description.

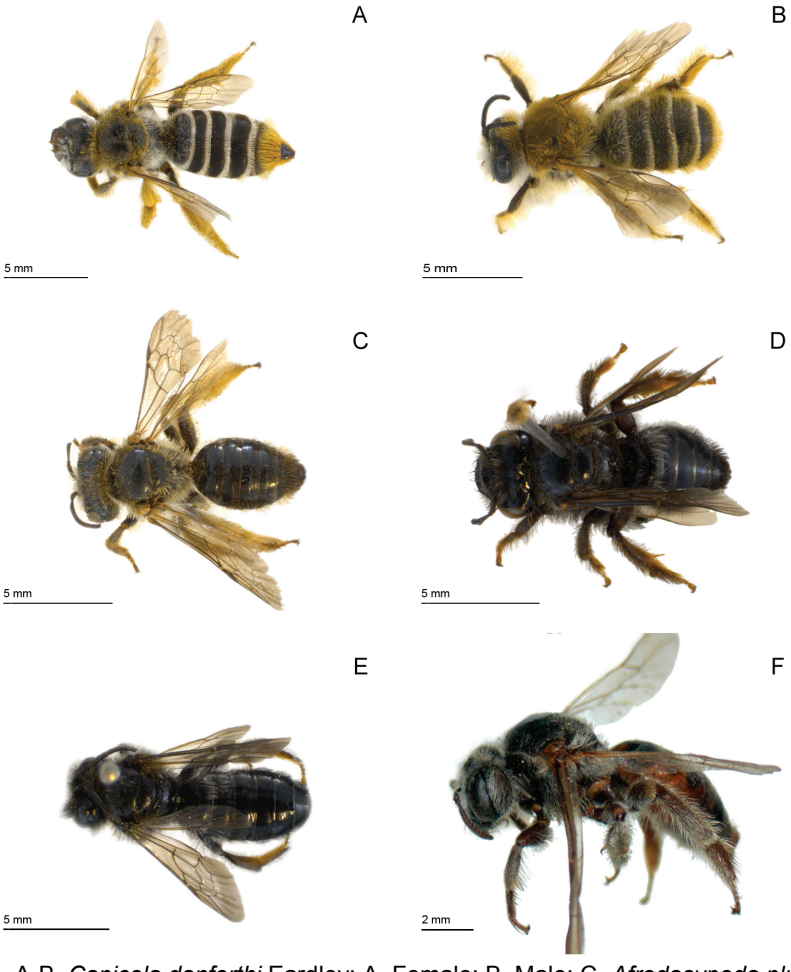

Fig. 22. A-B. *Capicola danforthi* Eardley: A. Female; B. Male; C. *Afrodasypoda plumipes* (Friese), female; D-E. *Haplomelitta atra* Michener: D. Female; E. Male; F. *Samba calcarata* Friese, female.

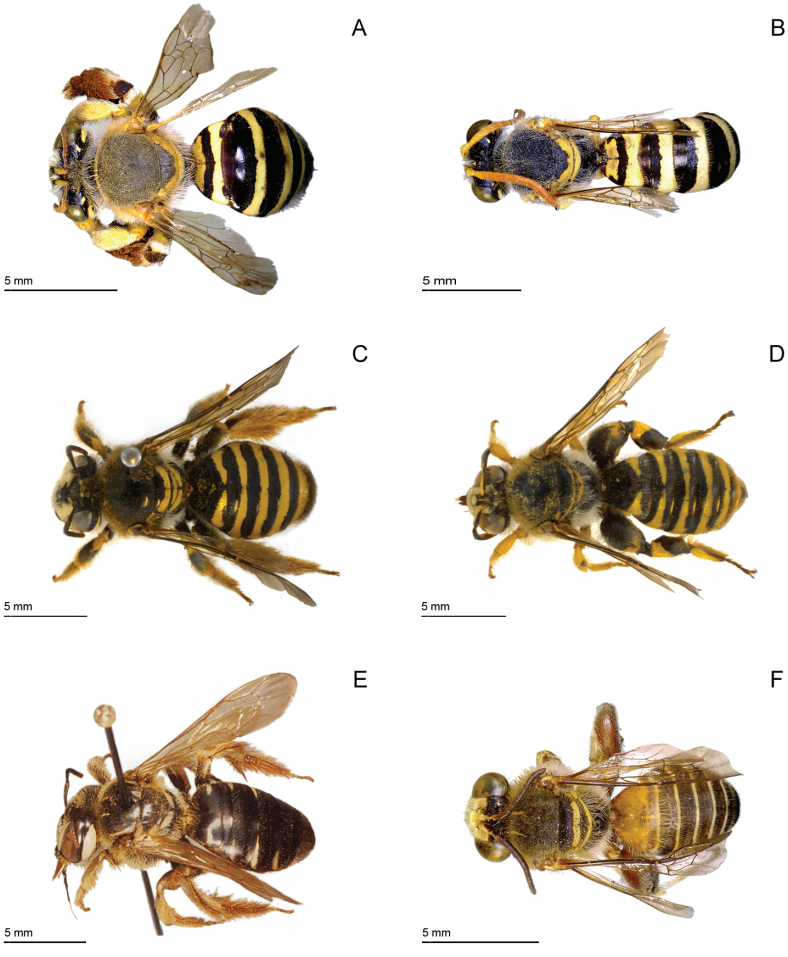

Fig. 23. A-B. *Ceratomonia rozenorum* Michener. A. Female; B. Male; C-D. *Meganomia binghami* (Cockerell); C. Female; D. Male; E. *Pseudophilanthus tsavoensis* (Strand, 1920), Female; F. *Uromonia stagei* Michener, male.

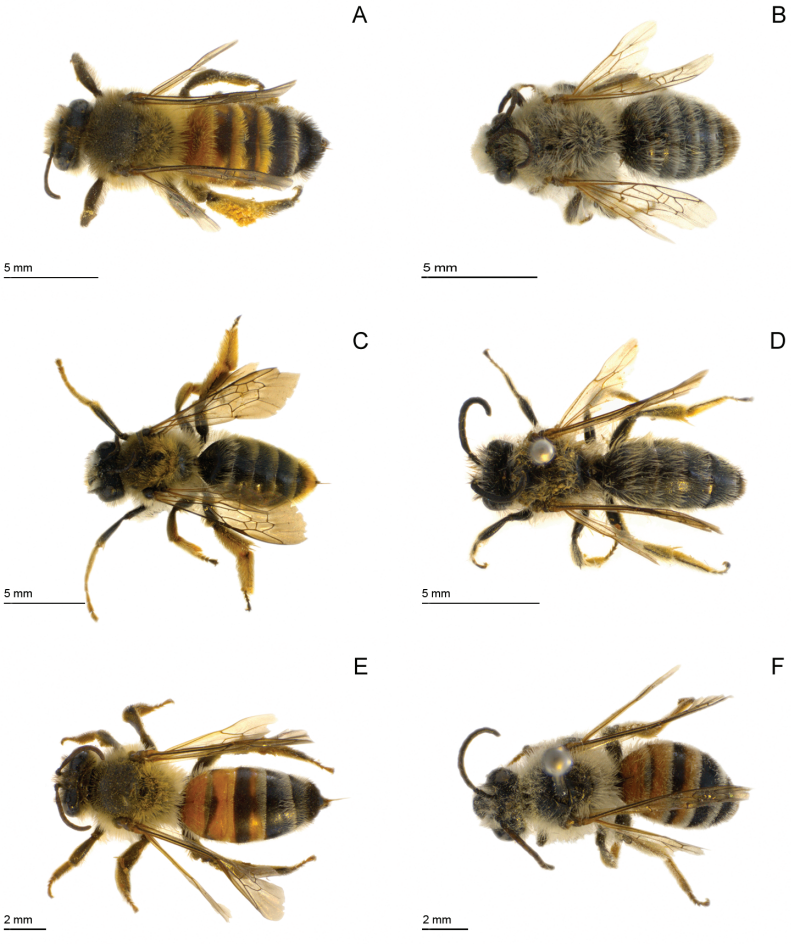

Fig. 24. A-B. *Melitta arrogans* (Smith): A. Female; B. Male; C-D. *Rediviva macgregori* Whitehead & Steiner: C. Female; D. Male. E-F. *Redivivoides simulans* Michener; E. Female; F. Male.