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Two new species of the South African endemic bee genus *Afroheriades* PETERS, 1970 (Hymenoptera: Megachilidae), with an updated key and additional species records

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A b s t r a c t : Two new South African endemic bee species of the genus *Afroheriades* PETERS, 1970 are described: *A. fynbosensis* KUHLMANN nov.sp. ♀♂ and *A. namaquaensis* KUHLMANN nov.sp. ♀. An updated key for species identification is presented and additional records of other described *Afroheriades* species are provided. Morphological characters for a possible subdivision of *Afroheriades* into subgenera are suggested.

K e y w o r d s : *Afroheriades*, *Archeriades*, new species, taxonomy, South Africa.

Introduction

Afroheriades PETERS, 1970 is a South African endemic genus of small bees (< 10 mm body length) that currently comprises five described (GRISWOLD & GONZALEZ 2011) and at least another five undescribed species, two of which are described here. According to MICHENER (2007) and GRISWOLD & GONZALEZ (2011) *Afroheriades* is characterised by the pronotal lobe and omaulus rounded, the posterolateral angle of the scutum with marginal ridge non-carinate and laterally with dense patch of long hairs, and lack of a carina surrounding the anterior surface of T1. In addition, males have a large, exposed T7 in a quadrate emargination of T6 and lack a midapical spine on S3.

MICHENER (2007) placed *Afroheriades* in the tribe Osmiini which is supported by the morphology based phylogeny of GONZALEZ et al. (2012). However, its phylogenetic position remains controversial (GRISWOLD & GONZALEZ 2011) since the results of molecular phylogenetic studies contradict this. *Afroheriades* consistently forms a monophyletic clade with *Pseudoheriades* PETERS, 1970 and was first excluded from the Osmiini by PRAZ et al. (2008), but its placement remained unresolved as it varied depending on the method of analysis (Parsimony analysis: sister to Anthidiini; Bayesian analysis: sister to Megachilini). However, later studies consistently placed it as a sister to Megachilini (LITMAN et al. 2011, ALMEIDA et al. 2023). *Afroheriades* and the closely related *Pseudoheriades* were recently united as the tribe Pseudoheriadini (GONZALEZ et al. 2019). The species-poor clade (15 described taxa according to ASCHER & PICKERING 2024) is of special evolutionary interest because it is the sister of the biologically diverse and second most species-rich bee tribe Megachilini, comprising just over 2000 species worldwide (GONZALEZ et al. 2019, ASCHER & PICKERING 2024).

According to the available records *Afroheriades* is restricted to the winter rainfall region

of Western South Africa and has been found from the Cape Peninsula in the south to the Richtersveld at the Namibian border in the north (GRISWOLD & GONZALEZ 2011, this paper). Occurrences in SW Namibia are likely, but so far no records have come to my attention. Apparently, species of the genus have not yet been recorded east of Prince Albert (PETERS 1970) and the Swartberg Mts. in the vicinity of De Rust (PETERS 1978).

In suitable habitats species can be locally common with adults on the wing from late winter throughout spring, but very little is known about the biology of *Afroheriades* (MICHENER 2007, GRISWOLD & GONZALEZ 2011). Despite extensive fieldwork over more than 20 years and collection of several hundred specimens, nests have never been found. However, preferred habitats and their slender elongate body suggest nesting in holes in dead wood or other above ground cavities. Females have been frequently observed to only collect pollen on a range of different Asteraceae so it seems safe to assume that at least the majority of species are oligolectic on this plant family.

In this publication two new *Afroheriades* species are described that are closely related to the unusually robust *A. prima* (PETERS, 1970) and a modified key is provided to facilitate the identification of species of the genus. In addition, new records of further species are published and potentially useful diagnostic characters for a subgeneric division of *Afroheriades* are discussed.

Material and Methods

Terminology used in the descriptions follows those of MICHENER (2007). F is used as abbreviation for an antennal flagellar segment, T for a metasomal tergum and S for a metasomal sternum. Body length is measured from the vertex to the apex of the metasoma. Puncture density is expressed as the relationship between puncture diameter (d) and the space between them (i), such as i = 1.5d or i < d.

To quantify the differences in proportions of the mesosoma of the two species groups within *Afroheriades*, the mesosoma of females of the five described and the two new species were examined. The length of the mesosoma was measured from the front edge of the pronotum to the end of the basal area of the propodeum. The intertegular distance (ITD) was used as a measure of the width of the mesosoma. Measurements were carried out with a Zeiss Stemi 508 at a magnification of 40x. The ratio was calculated by dividing the length of the mesosoma by the ITD (Tab. 1).

Tab. 1: Ratio of mesosomal length to width in female *Afroheriades* species.

	Ø	min.	max.	N
A. fynbosensis	1.20	1.15	1.22	8
A. namaquaensis	1.27	-	-	1
A. prima	1.30	1.25	1.36	10
A. dolichocephala	1.65	1.53	1.75	10
A. gemina	1.81	1.73	1.91	10
A. hyalina	1.62	1.57	1.71	10
A. larvata	1.88	1.82	1.94	10

Images were taken with a digital microscope (Keyence VHX-5000) using the VH-Z20R/Z20T (20x to 200x) zoom lens and the OP-42305 super diffused illumination adapter. Images were stacked for extended depth-of-field and processed using Adobe Photoshop Elements 2021 (Adobe Systems Software Ireland Limited, Republic of Ireland) and then assembled into the figure plates.

Genera ending on "-*heriades*" are feminine so previous use of masculine species epithets (e.g. EARDLEY & URBAN 2010, GRISWOLD & GONZALEZ 2011) is adapted accordingly (e.g. ASCHER & PICKERING 2024).

Unless stated otherwise specimens are deposited in the research collection of the author at the Zoological Museum of Kiel University, Kiel, Germany (RCMK). Holotypes will be deposited in the Iziko South African Museum, Cape Town, South Africa (SAMC).

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Descriptions of new species

Afroheriades fynbosensis KUHLMANN nov.sp. (Figs 1-2, 7-15, 19-24, 29, 31)

D i a g n o s i s : The female can be recognized by the following character combination: Mesosoma short, ratio of mesosomal length to width < 1.4; base of propodeum well below the level of the scutellum (Fig. 29); stipes on the ventral margin with a row of long, waved, yellowish hairs (Fig. 31); head about as wide as long (Fig. 1); clypeus slightly wider than long, medially densely punctate (i < d), ventral margin triangular or curved and irregularly notched (Fig. 2); T6 very finely and densely punctate, almost matt (Fig. 12).

The male can be recognized by the following character combination: F1–F4 expanded laterally (Fig. 13); basal zone of propodeum sloping posteriorly and well below the level of the scutellum (Fig. 29); S5 with extent and shape of erect tuft of bristles as shown in Fig. 14; genitalia as in Fig. 15. As already described by PETERS (1970) for *A. prima*, the males of both species are characterised by an unusually large variability in size, sculpturing and pubescence (extent, colour). They look very similar, so the most reliable features to distinguish them are the extent and outline of the erect bristle tuft on S5 (Figs 14, 17) and the shape of the genitalia (Figs 15, 18).

D e s c r i p t i o n

F e m a l e : Body-length: 6.3-7.0 mm (Habitus: Figs 7-8). Head wider than long (Fig. 1); ocellocular distance 0.9-1.0 times interocellar distance; ocelloccipital distance 0.7-0.8 times interocellar distance; compound eyes converging ventrally; clypeus densely punctate (i < d), ventral margin curved, irregularly notched (Fig. 2); mandible tridentate (Fig. 2); hypostomal area flat and polished, bounded laterally by a carina and a row of

curved hairs; labrum with medial area densely punctate (i < d), apical margin upturned; stipes on the ventral margin with a row of long, waved, yellowish hairs (Fig. 31). Mesosoma short, ratio of mesosomal length to width < 1.4 (Tab. 1), base of propodeum well below the level of the scutellum (Fig. 7); scutum as in Fig. 9; scutellum slightly convex (Fig. 10); metanotum and basal zone of propodeum sloping in lateral view, midline length of metanotum in dorsal view shorter than length of basal zone of propodeum (Fig. 10); surface of basal zone sculptured as in Fig. 10, without carina posteriorly. Metasoma as in Fig. 11; T6 roundly emarginate apically, with broad translucent apical lip projecting at strong angle to surface of tergum (Fig. 12).

Integument smooth and shiny between punctures (Figs 1, 9-12); clypeus medially densely punctate (i < d) (Fig. 2), on scutum moderate (i = 0.5-1d) (Fig. 9), on metasomal terga as in Fig. 11. Body black except flagellomeres ventrally, part of mandible and apical tarsal segments dark brown. Wings hyaline yellowish-brown; veins, stigma, prestigma dark brown. Pubescence mostly sparse, long and erect, on vertex and dorsal side of mesosoma light brown, otherwise white to yellowish-white (Figs 7-10); white, dense, appressed hair obscuring surface on paraocular area and apical patches or bands on T1-T3 (Fig. 11); scopa white.

M a l e : Body-length: 6.8-7.5 mm (Habitus: Fig. 19). Head wider than long; ocellocular distance 0.9-1.0 times interocellar distance; ocelloccipital distance 0.5-0.6 times interocellar distance; compound eyes converging ventrally; antennal scape enlarged, F1-F4 laterally expanded (Fig. 13). Mesosoma as in female (Fig. 19); scutum as in Fig. 20; scutellum slightly convex (Fig. 21); metanotum and basal zone of propodeum sloping in lateral view, midline length of metanotum in dorsal view shorter than length of basal zone of propodeum (Fig. 21); surface of basal zone sculptured as in Fig. 21, without carina posteriorly. Metasoma in dorsal view as in Fig. 22, T7 as in Fig. 24; sterna as in Figs 14, 23. Genitalia as illustrated (Fig. 15).

Integument smooth and shiny between punctures (Figs 20-22); scutum densely punctate (i < d) (Fig. 20), punctation on metasomal terga as in Fig. 22. Body black except F1-F4 yellowish-brown, following flagellomeres ventrally, part of mandible and apical tarsal segments dark brown. Wings hyaline yellowish-brown; veins, stigma, prestigma dark brown. Pubescence mostly sparse, long and erect, on vertex and dorsal side of mesosoma light brown, otherwise white to yellowish-white (Figs 19-22); white, dense, appressed hair obscuring surface on paraocular area, clypeus and apical patches or bands on T1-T3 (Fig. 22); pubescence on metasomal sterna as in Fig. 23, S5 with erect, oval tuft of bristles on disc (Fig. 14).

T y p e m a t e r i a l : (13 specimens).

Holotype: ♀, South Africa, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48´07´´S 18°55´00´´E, 380 m, 8.ix.2010, leg. M. Kuhlmann (SAMC).

Paratypes: South Africa: 1♂, Leliefontein, slope, 30.23288°S 18.16458°E, yellow trap, 7.ix.2003, leg. C. Mayer; 1♀, 15 km NW Nieuwoudtville, Farm Zoetfontein, Fynbos, 31°14´05´´S 19°02´50´´E, 775 m, 11.viii.2023, leg. M. Kuhlmann; 2♂♂, 15 km NW Nieuwoudtville, near Engelsepunt, Fynbos, 31°14´08´´S 18°58´23´´E, 843 m, 30.viii.2003, leg. K. Timmermann; 1♀, idem, 23.ix.2003; 1♀, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16´18´´S 19°02´55´´E, 770 m, 25.viii.2010, leg. M. Kuhlmann; 1♀, 20 km S Nieuwoudtville, Farm Papkuilsfontein, waterfall, S31°33´01´´S 19°07´24´´E, 680 m, 12.ix.2008, leg. H. Erhardt; 2♀♀, 1♂, 20 km S Nieuwoudtville, Farm Papkuilsfontein, Fynbos, 31°33´16´´S 19°08´31´´E, 680 m, leg. M. Kuhlmann; 1♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48´07´´S 18°55´00´´E, 380 m, 8.ix.2010, leg. M. Kuhlmann; 1♂, idem, 30.viii.2012.

E t y m o l o g y : Named after the Fynbos biome where this species was discovered.

G e n e r a l d i s t r i b u t i o n : So far, the species has only been found in the Kamiesberg Mts. and on the Bokkeveld Plateau. It is apparently restricted to Fynbos vegetation on sandy soils.

Afroheriades namaquaensis KUHLMANN nov.sp. (Figs 5-6, 25-28)

D i a g n o s i s : The female can be recognized by the following character combination: Mesosoma short, ratio of mesosomal length to width < 1.4; base of propodeum well below the level of the scutellum (Fig. 29); stipes on the ventral margin with a row of long, waved, yellowish hairs (Fig. 31); head wider than long (Fig. 5); clypeus medially densely punctate (i < d), ventral margin truncated (Fig. 6). The male is unknown.

D e s c r i p t i o n

F e m a l e : Body-length: 7.5 mm (Habitus: Fig. 25). Head wider than long (Fig. 5); ocellocular distance 0.9 times interocellar distance; ocelloccipital distance 0.8 times interocellar distance; compound eyes converging ventrally; clypeus densely punctate (i < d), ventral margin truncated (Fig. 6); mandible tridentate (Fig. 6); hypostomal area flat and polished, bounded laterally by a carina and a row of curved hairs; labrum with medial area densely punctate (i < d), apical margin upturned; stipes on the ventral margin with a row of long, waved, yellowish hairs. Mesosoma short, ratio of mesosomal length to width < 1.4 (Tab. 1), base of propodeum well below the level of the scutellum (Fig. 25); scutum as in Fig. 26; scutellum slightly convex (Fig. 27); metanotum and basal zone of propodeum sloping in lateral view, midline length of metanotum in dorsal view equal to length of basal zone of propodeum; surface of basal zone sculptured as in Fig. 27, without carina posteriorly. Metasoma as in Fig. 28; T6 roundly emarginate apically, with broad translucent apical lip projecting at strong angle to surface of tergum.

Integument smooth and shiny between punctures (Figs 5, 26-28); clypeus medially densely punctate (i < d) (Fig. 6), on scutum moderate (i = 0.5-1d) (Fig. 26), on metasomal terga as in Fig. 28. Body black except flagellomeres ventrally, part of mandible and apical tarsi dark brown. Wings hyaline yellowish-brown; veins, stigma, prestigma dark brown. Pubescence mostly sparse, long and erect, on vertex and dorsal side of mesosoma light brown, otherwise white to yellowish-white (Figs 25-27); white, dense, appressed hair obscuring surface on paraocular area and apical patches or bands on T1-T3 (Fig. 28); scopa white.

M a l e : Unknown.

T y p e m a t e r i a l (1 specimen):

Holotype: ♀, South Africa, 10 km SSE Steinkopf, road side N7, 29°19´56´´S 17°46´28´´E, 880 m, 12.ix.2017, leg. M. Kuhlmann (SAMC).

E t y m o l o g y : Named after Namaqualand, the arid region in NW South Africa where this species occurs.

G e n e r a l d i s t r i b u t i o n : Only known from the type locality near Steinkopf (Namaqualand).

New records of *Afroheriades* species

Species are listed in alphabetical order and collecting sites from north to south.

Afroheriades dolichocephala (Friese, 1925)

Osmia dolichocephala Friese, 1925: 505. Holotype ♀ (Ookiep [= Okiep], South Africa) (American Museum of Natural History, New York, United States of America).

Eriades reicherti Brauns, 1929: 140-141. Lectotype ♂ (Willowmore, South Africa) (Ditsong National Museum of Natural History, Pretoria, South Africa [former Transvaal Museum]).

Archeriades hennigi Peters, 1978: 340. Holotype ♀ (Kamieskroon, South Africa) (SAMC).

Material examined (59♀♀, 19♂♂).

South Africa: 12♀♀, 20 km NW Steinkopf, Escarpment, 29°08′49′′S 17°35′07′′E, 960 m, 12.ix.2017, leg. M. Kuhlmann; 2♀♀, Kamiesberg Mts., 26 km NNE Kamieskroon, road side, 30°03′45′′S 18°00′25′′E, 770 m, 3.x.2014, leg. M. Kuhlmann; 1♀, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°12′09′′S 19°50′04′′E, 870 m, 30.viii.2010, leg. M. Kuhlmann; 5♀♀, 15 km NW Nieuwoudtville, Farm Zoetfontein, Fynbos, 31°14′05′′S 19°02′50′′E, 775 m, 7.x.2022, leg. M. Kuhlmann; 11♀, idem, 8.x.2022; 2♀♀, idem, 9.x.2022; 1♂, idem, 11.viii.2023; 1♀, 1♂, 15 km NW Nieuwoudtville, near farm Engelsepunt, Fynbos, 31°14′08′′S 18°58′23′′E, 843 m, 30.viii.2003, leg. K. Timmermann; 1♂, 15 km NW Nieuwoudtville, Farm Engelsepunt, 31°14′31′′S 18°59′08′′E, 830 m, 7.viii.2003, leg. K. Timmermann; 1♂, 12 km NW Nieuwoudtville, Farm Avontuur, dolerite hill, 31°16′02′′S 19°04′05′′E, 830 m, 27.viii.2008, leg. H. Erhardt; 1♂, idem, 6.ix.2008, leg. M. Kuhlmann; 2♀♀, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16′18′′S 19°02′55′′E, 770 m, 25.viii.2010, leg. M. Kuhlmann; 1♂, idem, 25.viii.2017; 1♀, idem, 30.viii.2018; 1♂, idem, 7.ix.2023, leg. H. Erhardt; 1♂, Nieuwoudtville, Flower Reserve East, 31°21′55′′S 19°08′52′′E, 735 m, 13.ix.2002, leg. M. Kuhlmann; 1♂, idem, 16.ix.2002; 1♂, idem, 18.ix.2007; 1♀, Nieuwoudtville, Flower Reserve, dolerite hills, 31°22′10′′S 19°08′50′′E, 770 m, 27.viii.2006, leg. K. Timmermann; 9♀♀, idem, 19.ix.2007; 2♂♂, Nieuwoudtville, Glen Lyon, garden, 31°24′03′′S 19°08′34′′, 700 m, 23.viii.2003, leg. M. Kuhlmann; 1♀, 20 km S Nieuwoudtville, Farm Papkuilsfontein, Fynbos, 31°33′16′′S 19°08′31′′E, 680 m, 7.ix.2007, leg. M. Kuhlmann; 1♀, idem, 27.viii.2012; 1♀, 23 km ESE Vanrhynsdorp, Knersvlakte, road side, 31°44′06′′S 18°55′32′′E, 200 m, 17.viii.2010, leg. M. Kuhlmann; 1♂, Keiskie Mts., 3 km E Farm M′Vera, shale, 31°45′29′′S 19°54′13′′E, 1190 m, 30.viii.2016, leg. M. Kuhlmann; 1♂, Keiskie Mts., 5 km S Farm Nooiensrivier, burned area, 31°45′47′′S 19°50′17′′E, 1275 m, leg. M. Kuhlmann; 1♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48′07′′S 18°55′00′′E, 380 m, 23.viii.2012, leg. M. Kuhlmann; 2♀♀, idem, 30.viii.2012; 1♀, idem, 24.ix.2014; 2♀♀, idem, 19.ix.2016; 1♀, Cederberg Mts., road to Algeria, Olifants River bridge, 32°21′55′′S 18°57′06′′E, 150 m, 8.ix.2017, leg. M. Kuhlmann; 4♀♀, 5♂♂, 20 km W Sutherland, Farm Kanolfontein, road side, 32°24′43′′S 20°27′28′′E, 1385 m, 17.ix.2017, leg. M. Kuhlmann.

General distribution: The species seems to have a more restricted distribution and has been found throughout Namaqualand southwards to the vicinity of Sutherland in the Roggeveld Mts. and the Cederberg Mts. (Peters 1978).

Afroheriades gemina (Peters, 1978)

Archeriades geminus Peters, 1978: 339-340. Holotype ♀ (Kamieskroon, South Africa) (SAMC).

Material examined (177♀♀, 58♂♂):

South Africa: 9♀♀, 20 km NW Steinkopf, Escarpment, 29°08′49′′S 17°35′07′′E, 960 m, 12.ix.2017, leg. M. Kuhlmann; 4♀♀, 7 km NE Steinkopf, road side N7, 29°12′40′′ 17°47′11′′E, 970 m, 12.ix.2017, leg. M. Kuhlmann; 13♂♂, 10 km SSE Steinkopf, Granite hill, 29°20′40′′S 17°47′08′′E, 880 m, 20.viii.2023, leg. M. Kuhlmann; 4♀♀, 15 km SE Springbok, Pad R355, road

side, 29°43´31´´S 18°02´04´´E, 870 m, 25.ix.2009, leg. M. Kuhlmann; 1♀, Kamiesberg Mts., 5 km SE Leliefontein, road side, 30°20´09´´S 18°06´24´´E, 1400 m, 4.x.2014, leg. M. Kuhlmann; 1♀, idem, 5.x.2014; 1♂, Knersvlakte, 40 km N Vanrhynsdorp, Farm Kalkgat, 31°07´04´´S 18°55´18´´E, 140 m, 28.vii.2003, leg. K. Timmermann; 1♀, idem, 14.ix.2003; 1♀, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°10´32´´S 19°52´42´´E, 870 m, 1.ix.2007, leg. K. Timmermann; 1♀, idem, 16.ix.2007, leg. M. Kuhlmann; 1♂, Knersvlakte, 10 km S Farm Kalkgat, 31°11´S 18°56´E, 29.vii.2003, leg. K. Timmermann; 2♂♂, Hantam Mts., 30 km N Calvinia, 31°12´09´´S 19°50´04´´E, 880 m, 1.ix.2007, leg. K. Timmermann; 1♀, 1♂, idem, 16.ix.2007; 10♀, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°12´09´´S 19°50´04´´E, 870 m, 30.viii.2010, leg. M. Kuhlmann; 1♀, idem, 16.ix.2007, leg. K. Timmermann; 2♀♀, 15 km NW Nieuwoudtville, Farm Zoetfontein, Fynbos, 31°14´05´´S 19°02´50´´E, 775 m, 7.x.2022, leg. M. Kuhlmann; 2♀♀, idem, 9.x.2022; 1♂, idem, 11.viii.2023; 3♀♀, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16´18´´S 19°02´55´´E, 770 m, 25.viii.2010, leg. M. Kuhlmann; 1♀, Nieuwoudtville, garden, 31°22´S 19°07´E, 700 m, 20.ix.2007, leg. K. Timmermann; 1♂, Nieuwoudtville, Flower Reserve, dolerite hills, 31°22´10´´S 19°08´50´´E, 770 m, 27.viii.2006, leg. K. Timmermann; 1♀, idem, 19.ix.2007; 1♀, Nieuwoudtville, Flower Reserve, car park east, 31°22´18´´S 19°08´58´´E, 730 m, 24.ix.2006, leg. K. Timmermann; 1♀, idem, 11.x.2006, leg. M. Kuhlmann; 1♀, idem, 20.viii.2007; 1♀, 3♂♂, Knersvlakte, 30 km N Vanrhynsdorp, 31°22´23´´S 18°42´37´´E, 146 m, 22.viii.2003, leg. K. Timmermann; 1♀, 7♂♂, idem, 5.ix.2003; 5♀♀, idem, 6.ix.2003; 4♀♀, idem, 29.ix.2003; 1♂, 9 km N Calvinia, Plateau Hantam Mts., near antenna, 31°22´29´´S 19°47´03´´E, 1570 m, 30.viii.2011, leg. M. Kuhlmann; 1♂, idem, 2.x.2014; 4♀♀, Knersvlakte, along Gemsbokrivier-Pad, 31°23´57´´S 18°54´11´´E, 120-195 m, 14.ix.2007, leg. M. Kuhlmann; 4♀♀, 3♂♂, Knersvlakte, 4.5 km NE Grootdrif, Gemsbokrivier-Pad, road side, 31°25´54´´S 18°55´16´´E, 170 m, 17.viii.2010, leg. M. Kuhlmann; 11♀, 6♂♂, idem, 19.viii.2010; 8♀♀, 5♂♂, idem, 20.viii.2010; 8♀♀, idem, 10.ix.2010; 4♀♀, idem, 4.ix.2016; 15♀♀, idem, 19.ix.2022; 13♀♀, idem, 26.ix.2022; 1♀, idem, 6.x.2022; 1♀, Knersvlakte, Farm Kaap se Drif, 31°26´01´´S 18°47´34´´E, 22.ix.1999, leg. M. Kuhlmann; 6♀♀, Knersvlakte, 5 km N Grootdrif, Gemsbokrivier-Pad, 31°26´40´´S 18°56´23´´E, 195 m, 14.ix.2007, leg. K. Timmermann; 28♀♀, idem, 21.ix.2007; 1♂, 15 km SE Nieuwoudtville, Farm Grootfontein, dolerite hill, 31°30´06´´S 19°13´27´´E, 790 m, 11.ix.2009, leg. M. Kuhlmann; 3♀♀, 1♂, Vanrhynsdorp, garden, 31°36´31´´S 18°44´02´´E, 3.viii.2003, leg. K. Timmermann; 1♂, idem, 15.viii.2003; 4♀♀, 1♂, 18 km S Calvinia, Nooiensrivier Pad, dolerite, 31°37´16´´S 19°46´20´´E, 1100 m, 25.viii.2016, leg. M. Kuhlmann; 2♀♀, 1♂, idem, 31.viii.2016; 5♀♀, idem, 5.10.2022; 1♂, 18 km S Calvinia on R355, 200 m S Farm Boskloof, 31°38´36´´S 19°44´36´´E, 1000 m, 17.ix.2022, leg. H. Erhardt; 1♂, Keiski Mts., 3 km E Farm M´Vera, shale, 31°45´29´´S 19°54´13´´E, 1190 m, 30.viii.2016, leg. M. Kuhlmann; 1♀, Roggeveld Mts., 2 km S Farm Perdekloof, rivier, dolerite, 31°47´35´´S 19°58´16´´E, 1220 m, 1.ix.2017, leg. M. Kuhlmann; 1♂, idem, 2.ix.2017; 2♀♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48´07´´S 18°55´00´´E, 380 m, 8.ix.2010, leg. M. Kuhlmann; 1♀, idem, 9.viii.2011; 1♂, idem, 23.viii.2012; 2♀♀, idem, 30.viii.2012; 1♂, Roggeveld Mts., 1 km S Farm Allemansdam, road side, 31°49´05´´S 19°59´15´´E, 1270 m, 1.ix.2017, leg. M. Kuhlmann; 1♀, Tankwa Karoo, De Zyfer Cottage, 32°14´49´´S 20°06´31´´E, 500 m, 20.ix.2016, leg. H. Erhardt; 3♂♂, Farm Kanolfontein, 20 km W Sutherland, road side, 32°24´43´´S 20°27´28´´E, 1385 m, 7.ix.2012, leg. M. Kuhlmann.

General distribution: The species is widespread throughout Namaqualand and has been found eastwards to the Swartberg Mts. in the vicinity of De Rust (PETERS 1978).

Afroheriades hyalina GRISWOLD & GONZALEZ, 2011

Afroheriades hyalinus GRISWOLD & GONZALEZ, 2011: 69-72. Holotype ♂ (Studer´s Pass, South Africa) (SAMC).

Material examined (40♀♀, 46♂♂):

South Africa: 2♀♀, 5 km SE Lekkersing, road side, 29°03´28´´S 17°07´16´´E, 300 m, 10.ix.2016, leg. M. Kuhlmann; 1♂, 10 km SSE Steinkopf, Granite hill, 29°20´40´´S 17°47´08´´E, 880 m, 20.viii.2023, leg. M. Kuhlmann; 8♂♂, Kamiesberg Mts., 8 km WNW Leliefontein, road side, Fynbos, 30°15´58´´S 18°03´17´´E, 1190 m, 10.ix.2017, leg. M. Kuhlmann; 6♀♀, 1♂, Kamiesberg Mts., 5 km SE Leliefontein, road side, 30°20´09´´S 18°06´24´´E, 1400 m, 5.x.2014, leg. M.

Kuhlmann; 2♀♀, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°10´32´´S 19°52´42´´E, 870 m, 1.ix.2007, leg. K. Timmermann; 1♀, idem, 16.ix.2007, leg. M. Kuhlmann; 2♀♀, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°12´09´´S 19°50´04´´E, 870 m, 1.ix.2007, leg. K. Timmermann; 6♀♀, idem, 16.ix.2007; 1♂, 15 km NW Nieuwoudtville, Farm Zoetfontein, Fynbos, 31°14´05´´S 19°02´50´´E, 775 m, 29.viii.2023, leg. M. Kuhlmann; 1♀, 15 km NW Nieuwoudtville, Farm Engelsepunt, Fynbos, 31°14´30´´S 18°59´13´´E, 830 m, 10.x.2006, leg. M. Kuhlmann; 2♂♂, 12 km NW Nieuwoudtville, Farm Avontuur, dolerite hill, 31°16´02´´S 19°04´05´´E, 830 m, 6.ix.2008, leg. M. Kuhlmann; 1♂, idem, leg. H. Erhardt; 1♂, idem, 9.ix.2022, leg. H. Erhardt; 3♂♂, idem, 7.ix.2023, leg. H. Erhardt; 1♂, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16´18´´S 19°02´55´´E, 770 m, 16.viii.2011, leg. M. Kuhlmann; 2♀♀, 1♂, Nieuwoudtville, Flower Reserve, dolerite hills, 31°22´10´´S 19°08´50´´E, 770 m, 19.ix.2007, leg. K. Timmermann; 1♀, Nieuwoudtville, Flower Reserve, car park east, 31°22´18´´S 19°08´58´´E, 730 m, 28.ix.2006, leg. M. Kuhlmann; 4♀♀, idem, 16.x.2006; 1♂, idem, 19.x.2006; 1♀, Knersvlakte, along Gemsbokrivier-Pad, 31°23´57´´S 18°54´11´´E, 120-195 m, 14.ix.2007, leg. M. Kuhlmann; 2♀♀, 20 km S Nieuwoudtville, Farm Papkuilsfontein, Fynbos, 31°33´16´´S 19°08´31´´E, 680 m, 7.ix.2007, leg. M. Kuhlmann; 1♂, Keiski Mts., 3 km E Farm M´Vera, shale, 31°45´29´´S 19°54´13´´E, 1190 m, 30.viii.2016, leg. M. Kuhlmann; 1♂, idem, 26.viii.2017; 1♂, Keiskie Mts., 5 km S Farm Nooiensrivier, dolerite hill, 31°45´54´´S 19°50´17´´E, 1270 m, 29.viii.2010, leg. M. Kuhlmann; 4♂♂, Roggeveld Mts., 2 km S Farm Perdekloof, rivier, dolerite, 31°47´35´´S 19°58´16´´E, 1220 m, 1.ix.2017, leg. M. Kuhlmann; 3♂♂, idem, 2.ix.2017; 1♂, idem, 28.ix.2022; 1♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48´07´´S 18°55´00´´E, 380 m, 8.ix.2010, leg. M. Kuhlmann; 2♂♂, idem, 9.viii.2011; 1♀, 11♂, idem, 23.viii.2012; 1♂, idem, 30.viii.2012; 3♀♀, idem, 9.x.2014; 3♀♀, 27.viii.2016; 1♀, idem, 19.ix.2016; 1♀, Tankwa Karoo, De Zyfer Cottage, 32°14´49´´S 20°06´31´´E, 500 m, 20.ix.2016, leg. H. Erhardt.

General distribution: The species has been found throughout Namaqualand southwards to the Cape Peninsula and the vicinity of Montagu (GRISWOLD & GONZALEZ 2011).

Afroheriades larvata (FRIESE, 1909)

Eriades larvatus FRIESE, 1909: 316. Lectotype ♂ (Steinkopf, South Africa) (Museum für Naturkunde, Berlin, Germany [former Zoologisches Museum der Humboldt Universität]).

Material examined (14♀♀, 9♂♂):

South Africa: 1♀, 8 km WNW Leliefontein, Fynbos, road side, 30°15´58´´S 18°03´17´´E, 1190 m, 14.ix.2017, leg. M. Kuhlmann; 2♀♀, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16´18´´S 19°02´55´´E, 770 m, 13.viii.2010, leg. M. Kuhlmann; 1♂, Keiski Mts., 3 km E Farm M´Vera, shale, 31°45´29´´S 19°54´13´´E, 1190 m, 19.viii.2017, leg. M. Kuhlmann; 1♂, idem, 26.viii.2017; 1♀, idem, 28.viii.2023; 1♀, Roggeveld Mts., 2 km S Farm Perdekloof, rivier, dolerite, 31°47´35´´S 19°58´16´´E, 1220 m, 2.ix.2017, leg. M. Kuhlmann; 2♀♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48´07´´S 18°55´00´´E, 380 m, 8.ix.2010, leg. M. Kuhlmann; 4♀♀, 6♂♂, idem, 23.viii.2012; 1♀, idem, 24.ix.2014; 1♀, idem, 19.ix.2016; 1♀, 1♂, 20 km W Sutherland, Farm Kanolfontein, road side, 32°24´43´´S 20°27´28´´E, 1385 m, 7.ix.2012, leg. M. Kuhlmann.

General distribution: The species apparently has a more restricted distribution and has been found from northern Namaqualand (PETERS 1978) to the Roggeveld Mts. in the vicinity of Sutherland in the south.

Afroheriades prima (PETERS, 1970)

Pseudoheriades primus PETERS, 1970: 156-159. Holotype ♂ (Pakhuis Pass, South Africa) (SAMC).

Material examined (69♀♀, 37♂♂):

South Africa: 1♀, 15 km NW Vioolsdrif, Orange River valley, 28°42′02′′S 17°30′22′′E, 310 m, 9.ix.2016, leg. M. Kuhlmann; 5♀♀, 5 km SE Lekkersing, road side, 29°03′28′′S 17°07′16′′E, 300 m, 10.ix.2016, leg. M. Kuhlmann; 2♀♀, 1♂, 20 km NW Steinkopf, Escarpment, 29°08′49′′S 17°35′07′′E, 960 m, 12.ix.2017, leg. M. Kuhlmann; 1♂, 7 km NE Steinkopf, road side N7, 29°12′40′′ 17°47′11′′E, 970 m, 12.ix.2017, leg. M. Kuhlmann; 1♀, 10 km SSE Steinkopf, road side N7, 29°19′56′′S 17°46′28′′E, 880 m, 12.ix.2017, leg. M. Kuhlmann; 1♀, 15 km SE Springbok, Pad R355, road side, 29°43′31′′S 18°02′04′′E, 870 m, 25.ix.2009, leg. M. Kuhlmann; 2♀♀, 1♂, Kamiesberg Mts., 5 km SE Leliefontein, road side, 30°20′09′′S 18°06′24′′E, 1400 m, 5.x.2014, leg. M. Kuhlmann; 1♂, idem, 7.ix.2016; 2♂♂, idem, 11.ix.2016; 2♀♀, Knersvlakte, 40 km N Vanrhynsdorp, Farm Kalkgat, 31°07′04′′S 18°55′18′′E, 140 m, 4.x.2003, leg. K. Timmermann; 1♀, 20 km N Nieuwoudtville, Vlei near Hellse Pad, Fynbos, 31°10′34′′S 19°01′09′′E, 810 m, 27.ix.2014, leg. M. Kuhlmann; 5♀♀, idem, 28.ix.2014; 6♀♀, 6♂♂, Hantam Mts., 32 km N Calvinia, S Klipwerf Farm, river bank, 31°12′09′′S 19°50′04′′E, 870 m, 30.viii.2010, leg. M. Kuhlmann; 1♀, 12 km NW Nieuwoudtville, Farm Avontuur, Fynbos, 31°16′18′′S 19°02′55′′E, 770 m, 19.ix.2009, leg. M. Kuhlmann; 3♀♀, idem, 14.ix.2010; 1♀, idem, 25.ix.2014; 2♂♂, 10 km N Nieuwoudtville, Farm Grasberg, dolerite hill, 31°18′01′′S 19°05′42′′E, 800 m, 12.ix.2009, leg. M. Kuhlmann; 4♀♀, 2♂♂, 12 km N Calvinia, Plateau Hantam Mts., weather station, 31°21′13′′S 19°47′53′′, 1580 m, 11.ix.2010, leg. M. Kuhlmann; 1♂, Nieuwoudtville, Flower Reserve East, 31°21′56′′S 19°08′52′′E, 735 m, 16.ix.2002, leg. M. Kuhlmann; 1♀, Knersvlakte, 30 km N Vanrhynsdorp, 31°22′23′′S 18°42′37′′E, 146 m, 22.viii.2003, leg. K. Timmermann; 1♀, idem, 5.ix.2003; 1♀, 1♂, idem, 6.ix.2003; 1♀, 2♂♂, 9 km N Calvinia, Plateau Hantam Mts., near antenna, 31°22′29′′S 19°47′03′′E, 1570 m, 30.viii.2011, leg. M. Kuhlmann; 2♂♂, idem, 2.x.2014; 4♀♀, 1♂, idem, 14.x.2014; 1♀, Nieuwoudtville, Hantam Botanical Garden, Renosterveld at entrance, 31°23′25′′S 19°07′56′′E, 730 m, 2.ix.2010, leg. M. Kuhlmann; 1♂, Knersvlakte, 4.5 km NE Grootdrif, Gemsbokrivier-Pad, road side, 31°25′54′′S 18°55′16′′E, 170 m, 19.viii.2010, leg. M. Kuhlmann; 2♀♀, Knersvlakte, 5 km N Farm Kaap se Drif, 31°34′47′′S 18°30′13′′E, 19.ix.1999, leg. M. Kuhlmann; 2♀♀, 3♂♂, 18 km S Calvinia, Nooiensrivier Pad, dolerite, 31°37′16′′S 19°46′20′′E, 1100 m, 25.viii.2016, leg. M. Kuhlmann; 2♀♀, 1♂, idem, 31.viii.2016; 1♀, idem, 5.x.2022; 1♀, Keiskie Mts., 5 km S Farm Nooiensrivier, new burned area, 31°45′41′′S 19°50′17′′E, 1270 m, 1.x.2014, leg. M. Kuhlmann; 3♀♀, Keiskie Mts., 5 km S Farm Nooiensrivier, burned area, 31°45′47′′S 19°50′17′′E, 1275 m, 4.ix.2010, leg. M. Kuhlmann; 3♀♀, idem, 12.ix.2010; 1♀, 27 km SE Vanrhynsdorp, Ouberg Pass, Fynbos, 31°48′07′′S 18°55′00′′E, 380 m, 8.ix.2010, leg. M. Kuhlmann; 1♀, idem, 30.viii.2012; 1♂, Roggeveld Mts., 2 km SE Farm Allemansdam, burnt area, 31°49′32′′S 19°59′55′′E, 1290 m, 29.viii.2018, leg. M. Kuhlmann; 1♀, 3♂♂, Tankwa Karoo, Gannaga Pass / Lodge, 32°06′24′′S 20°07′40′′E, 1260 m, 21.ix.2016, leg. H. Erhardt; 4♀♀, 1♂, Cederberg Mts., road to Algeria, Olifants River bridge, 32°21′55′′S 18°57′06′′E, 150 m, 8.ix.2017, leg. M. Kuhlmann; 2♀♀, 1♂, 6 km NNW Farm Kanariesfontein, 30 km W Sutherland, road side, 32°22′17′′S 20°22′50′′E, 1310 m, 17.ix.2017, leg. M. Kuhlmann; 2♀♀, 2♂♂, 3 km NW Farm Kanolfontein, 22 km W Sutherland, road side, 32°23′17′′S 20°26′32′′E, 1350 m, 18.ix.2017, leg. M. Kuhlmann; 1♂, 40 km SSE Sutherland, Farm De Kom, 32°44′34′′S 20°43′06′′E, 1300 m, 8.ix.2012, leg. M. Kuhlmann.

General distribution: This *Afroheriades* species has one of the widest known distributions. It has been found in large parts of the winter rainfall region from the Orange river valley of northern Namaqualand eastwards to Matjesfontein and Prince Albert (PETERS 1970).

Updated keys to *Afroheriades* species

The keys are based on those provided by GRISWOLD & GONZALEZ (2011) and modified to accommodate the newly described species.

Females

1 Mesosoma short, ratio of mesosomal length to width < 1.4 (Tab. 1), base of propodeum well below the level of the scutellum (Fig. 29); stipes on the ventral margin with a row of long, waved, yellowish hairs (Figs 30-31); clypeus medially densely punctate (i < d) (Figs 2, 4, 6) 2

- Mesosoma elongate, ratio of mesosomal length to width in females > 1.5 (Tab. 1), base of propodeum at the same plane as the scutellum (Fig. 32); stipes without a row of long, waved, yellowish hairs (Fig. 33); clypeus medially sparsely punctate (i > d) (Fig. 34) 4

2 Clypeal margin ventrally triangular or curved, irregularly notched (Figs 2, 4) 3

- Clypeal margin ventrally truncated (Fig. 6) ..... *A. namaquaensis* nov.sp.

3 Head about as wide as long (Fig. 1); clypeus slightly wider than long (Fig. 2); T6 very finely and densely punctate, almost matt (Fig. 12) ..... A. *fynbosensis* nov.sp.

- Head wider than long (Fig. 3); clypeus almost twice as wide as long (Fig. 4); T6 slightly coarser and more scattered punctate, shiny..... *A. prima* (PETERS)

4 Distance between middle and upper teeth of mandible at most one and a half times distance between lower and middle teeth; clypeal margin not produced ventrally..... 5

- Distance between middle and upper teeth of mandible at least two and a half times distance between lower and middle teeth; clypeal margin produced ventrally..... ..... *A. gemina* (PETERS)

5 Hypostomal carina with obtuse angle, anterior limb equal in length to posterior limb; inner eye orbits converging below; clypeal margin minutely crenulate 6

- Hypostomal carina with right angle, anterior limb shorter than posterior limb; inner eye orbits parallel; clypeal margin smooth ..... *A. dolichocephala* (FRIESE)

6 Basal zone of propodeum almost twice as long as metanotum, not bounded posteriorly by a carina; anterior face of T1 virtually impunctate..... *A. larvata* (FRIESE)

- Basal zone of propodeum scarcely longer than metanotum, bounded posteriorly by a carina; anterior face of T1 distinctly, though finely, punctate..... ..... *A. hyalina* GRISWOLD & GONZALEZ

Males

The male of *A. namaquaensis* nov.sp. is unknown.

1 F2–F10 not produced ventrally 2

- F2–F10 roundly produced ventrally ..... *A. gemina* (PETERS)

2 F1–F4 expanded laterally (Figs 13, 16); basal zone of propodeum sloping posteriorly and well below the level of the scutellum (Fig. 29)..... 3

- F1–F4 not expanded laterally; basal zone of propodeum horizontal, at the same plane as the scutellum (Fig. 32) 4

3 S5 with extent and shape of erect tuft of bristles as shown in Fig. 17; genitalia as in Fig. 18 ..... *A. prima* (PETERS)

- S5 with extent and shape of erect tuft of bristles as shown in Fig. 14; genitalia as in Fig. 15 ..... *A. fynbosensis* nov.sp.

4 Apical margin of T7 laterally without elongate spine; inner eye orbits converging ventrally; ocelloccipital distance equal to ocellar diameter 5

- Apical margin of T7 laterally with elongate spine; inner eye orbits parallel; ocelloccipital distance greater than ocellar diameter..... *A. dolichocephala* (FRIESE)

5 Basal zone of propodeum bounded posteriorly by carina; F2 twice as long as F1 .... *A. hyalina* GRISWOLD & GONZALEZ

- Basal zone of propodeum not bounded posteriorly by carina; F2 no longer than F1..... ..... *A. larvata* (FRIESE)

Subgeneric division of *Afroheriades*

MICHENER (2007) and GRISWOLD & GONZALEZ (2011) have already discussed potential diagnostic morphological characters and the division of *Afroheriades* into two species groups which correspond to the two (sub)genera *Afroheriades* PETERS, 1970 and *Archeriades* PETERS, 1978 (PETERS 1970, 1978). They mentioned the striking differences in the proportions of the mesosoma of the two species groups within *Afroheriades*: the rather robust *A. prima* and the remaining four slender species with a more elongate mesosoma. Until the discovery of the two new taxa described here, *A. prima* was the only known species with this feature and PETERS (1970) originally introduced *Afroheriades* as a subgenus of *Pseudoheriades* to accomodate it. The taxa with elongate mesosoma were placed in the genus *Archeriades* PETERS, 1978 (PETERS 1978).

The discovery of the two new species, which are closely related to *A. prima*, opened up the possibility to test this assumption that differences in mesosomal proportions are suitable for differentiating species groups and to identify on a broader basis further potential diagnostic features for distinguishing them. Based on the study of all *Afroheriades* species described to date potentially suitable characters are summarised in Table 2 below. The list is certainly not comprehensive, but may serve as a starting point.

Tab. 2: Potential diagnostic characters for a subgeneric division of *Afroheriades*.

***Afroheriades* s. str.**	***Archeriades***
Mesosoma short (Fig. 29), ratio of mesosomal length to width in females < 1.4 (Tab. 1)	Mesosoma elongate (Fig. 32), ratio of mesosomal length to width in females > 1.5 (Tab. 1)
Base of propodeum well below the level of the scutellum (Fig. 29)	Base of propodeum at the same plane as the scutellum (Fig. 32)
♀♀	♀♀
Clypeus medially densely punctate (i < d) (Figs 2, 4, 6)	Clypeus medially sparsely punctate (i > d) (Fig. 34)
Base of inner margin of the mandible with a tuft of long hairs (Figs 2, 4, 6)	Base of inner margin of the mandible without a tuft of long hairs; sometimes inner margin with a fringe of ± equally long hairs (Fig. 34)
Hypostomal area flat and polished, bounded laterally by a carina and a row of curved hairs (Fig. 30)	Hypostomal area not modified as in *Afroheriades* s. str. (Fig. 33)
Base of stipes on the ventral margin with a row of long, waved, yellowish hairs (Figs 30, 31)	Base of stipes without such hairs (Fig. 33)
♂♂	♂♂
Antennal flagellar segments F1–F4 expanded laterally (Figs 13, 16)	Antennal flagellum unmodified, filiform (in *A. gemina* (PETERS, 1978) F2–F10 roundly produced ventrally)

As GRISWOLD & GONZALEZ (2011: 68) rightly stated, a subgeneric system in *Afroheriades* should only be established based on a phylogenetic analysis and a comprehensive revision. The characters proposed here might be useful as a basis for further investigations and, after description of the remaining species and in combination with molecular data, could be used for a subgeneric classification.

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Zusammenfassung

Zwei neue in Südafrika endemische Bienenarten der Gattung *Afroheriades* werden beschrieben: *A. fynbosensis* KUHLMANN nov.sp. ♀♂ and *A. namaquaensis* KUHLMANN nov.sp. ♀. Ein aktualisierter Bestimmungsschlüssel sowie weitere Funde bereits beschriebener *Afroheriades*-Arten werden vorgelegt und morphologische Merkmale für eine mögliche Einteilung von *Afroheriades* in Untergattungen vorgeschlagen.

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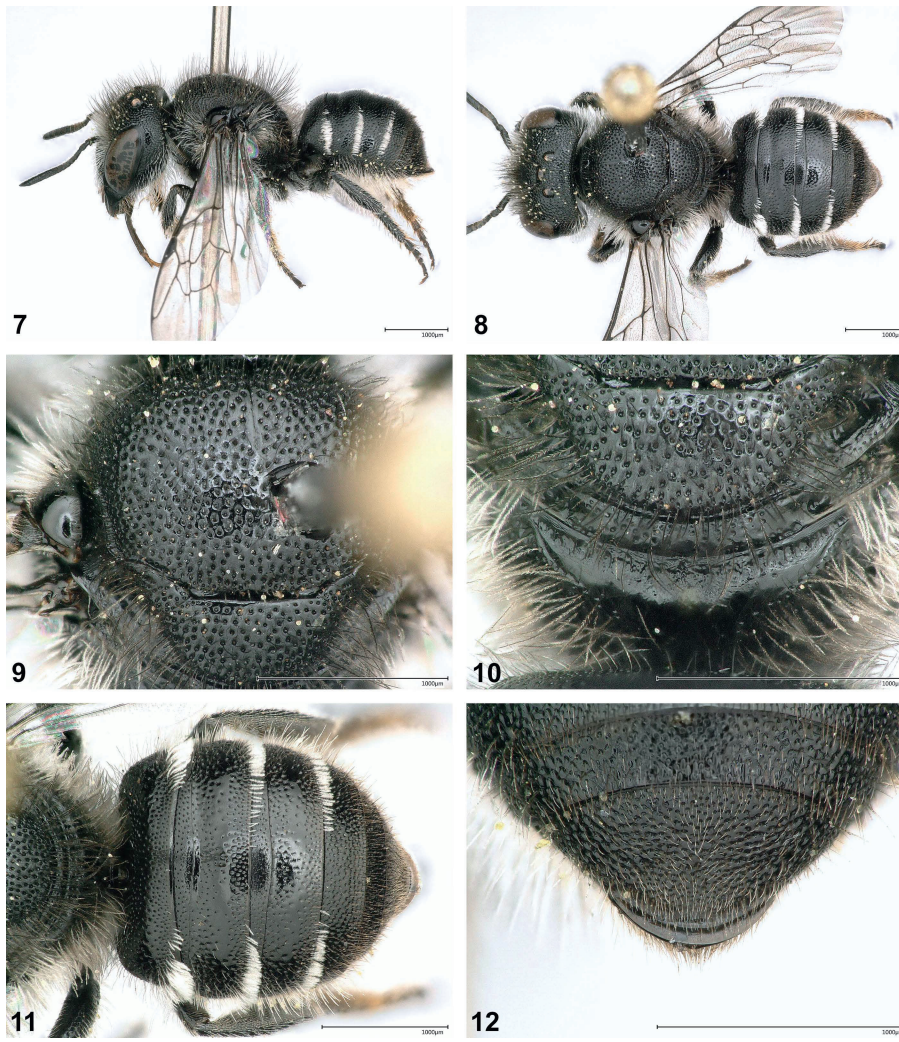
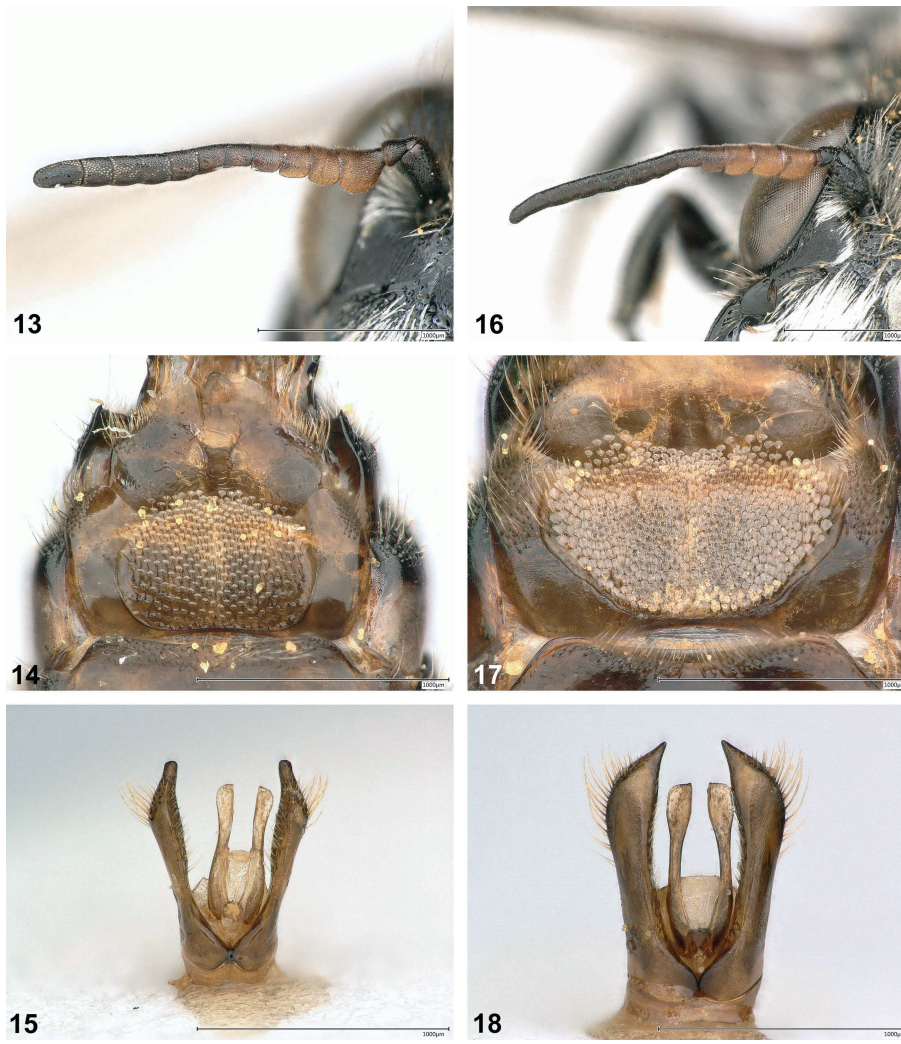
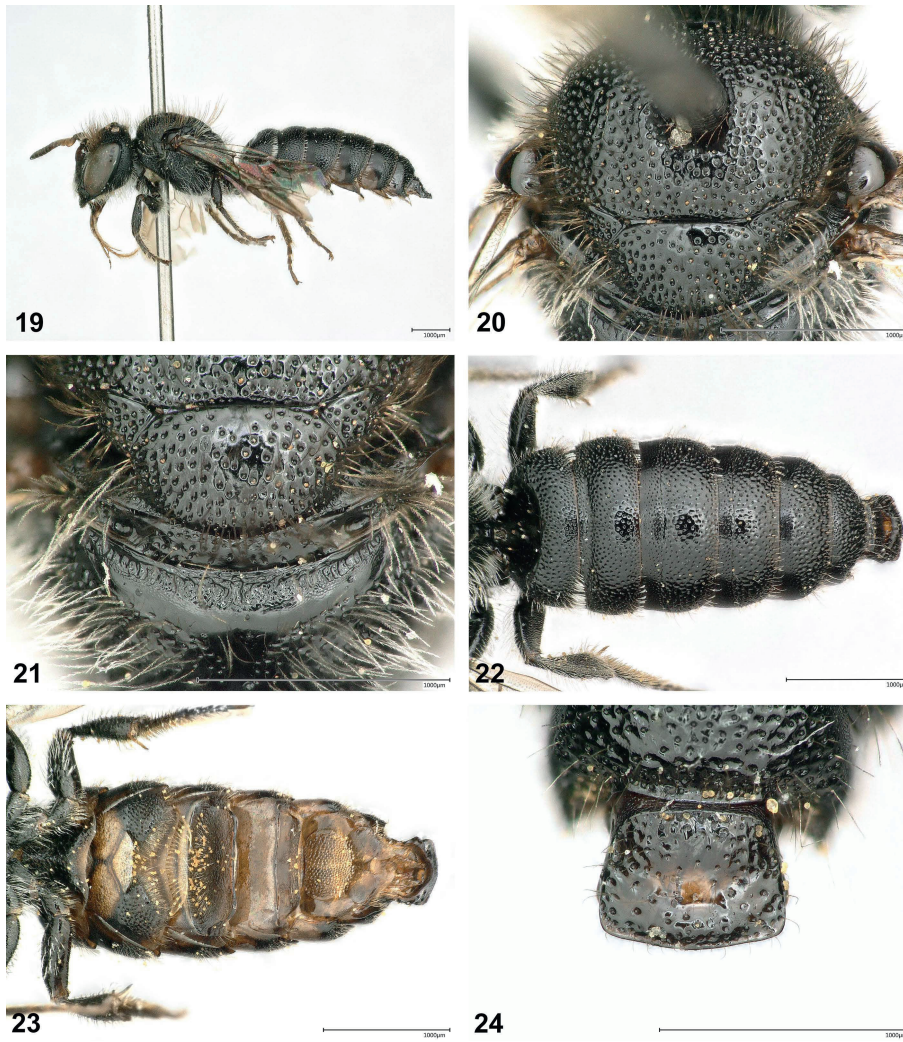
Figs 1-2: *Afroheriades fynbosensis* KUHLMANN nov.sp., ♀; (**1**) head, (**2**) clypeus and mandibles. **Figs 3-4**: *A. prima* (PETERS, 1970), ♀; (**3**) head, (**4**) clypeus and mandibles. **Figs 5-6**: *A. namaquaensis* KUHLMANN nov.sp., ♀; (**5**) head, (**6**) clypeus and mandibles.



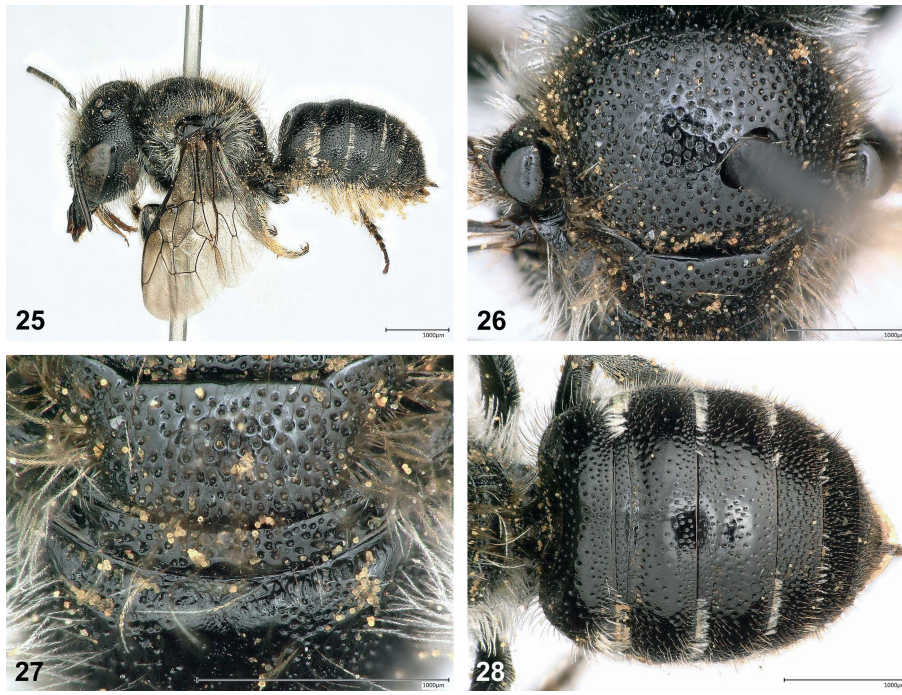
Figs 7-12: *Afroheriades fynbosensis* KUHLMANN nov.sp., ♀; (**7**) lateral view, (**8**) dorsal view, (**9**) scutum, (**10**) scutellum, metanotum and propodeum, (**11**) metasoma dorsal, (**12**) metasomal T6.



Figs 13-15: *Afroheriades fynbosensis* KUHLMANN nov.sp., ♂; (**13**) antenna, (**14**) metasomal S5 with tuft of erect bristles, (**15**) genitalia dorsal. **Figs 16-18**: *A. prima* (PETERS, 1970), ♂; (**16**) antenna, (**17**) metasomal S5 with tuft of erect bristles; (**18**) genitalia dorsal.



Figs 19-24: *Afroheriades fynbosensis* KUHLMANN nov.sp., ♂; (**19**) lateral view, (**20**) scutum, (**21**) scutellum, metanotum and propodeum, (**22**) metasoma dorsal, (**23**) metasoma ventral, (**24**) metasomal T7.



Figs 25-28: *Afroheriades namaquaensis* KUHLMANN nov.sp., ♀; (**25**) lateral view, (**26**) scutum,(**27**) scutellum, metanotum and propodeum, (**28**) metasoma dorsal.

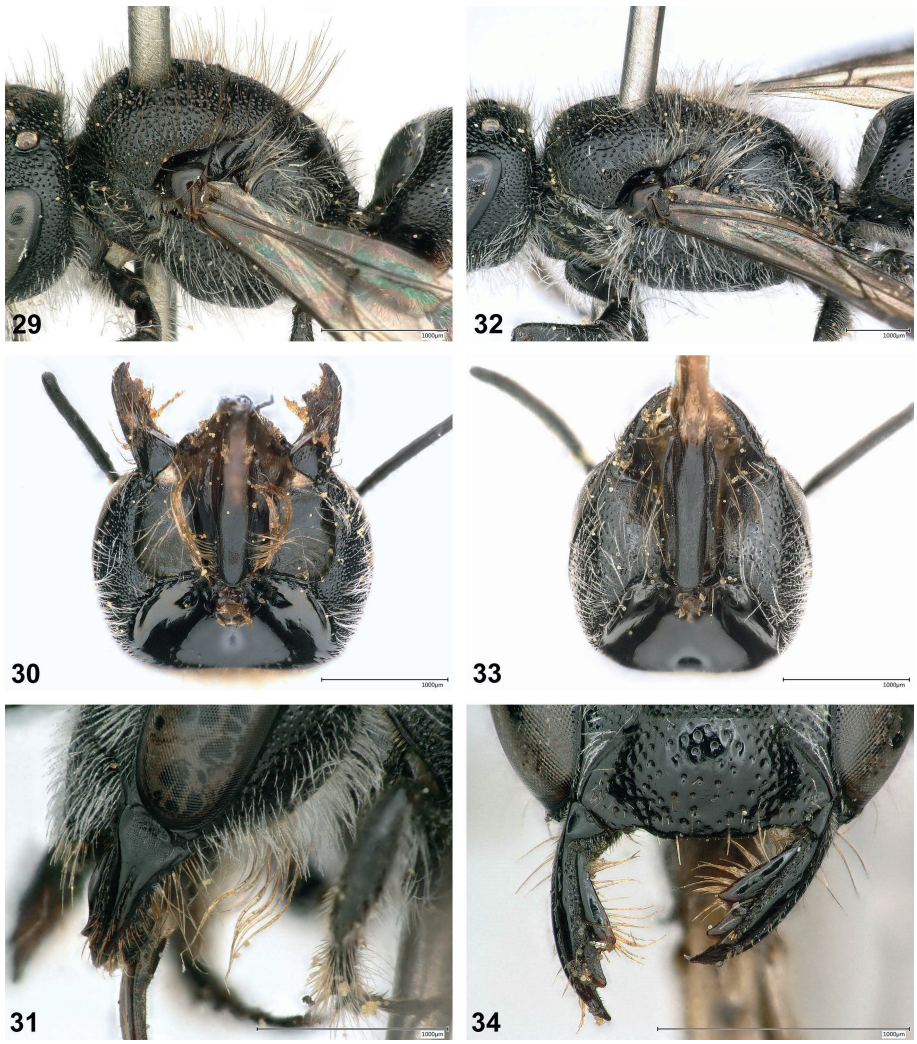


Fig. 29: *Afroheriades fynbosensis* KUHLMANN nov.sp., ♂, short mesosoma in lateral view with base of propodeum well below the level of the scutellum. **Fig. 30**: *A. prima* (PETERS, 1970), ♀, hypostomal area flat and polished, bounded laterally by a carina and a row of curved hairs, base of stipes on the ventral margin with a row of long, waved, yellowish hairs. **Fig. 31**: *A. fynbosensis* KUHLMANN nov.sp., ♀, head in lateral view, below with row of long, waved, yellowish hairs originating at the base of stipes. **Figs 32-34**: *A. dolichocephala* (FRIESE, 1925), ♀; (**32**) elongate mesosoma in lateral view with base of the propodeum at the same plane as the scutellum, (**33**) hypostomal area unmodified, base of stipes without long hairs, (**34**) clypeus and mandibles.