

TWO NEW SPECIES OF *ATROCRATES* KOCH, 1956 FROM SOUTH AFRICA (COLEOPTERA: TENEBRIONIDAE: PLATYNOTINI)

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Abstract.— *Atrocrates bellamyi* sp. nov. and *A. robertsoniensis* sp. nov. are described and illustrated. The species belong to the generic group trigonopoid Platynotina from South Africa.



Key words.— Coleoptera, Tenebrionidae, Platynotini, *Atrocrates*, new species, South Africa.

Atrocrates Koch is classified in the trigonopoid Platynotina, where it is closely related to *Crypticanus* Fairmaire and *Atrocrypticanus* Iwan (Iwan 1999). In my recent revision of the *Atrocrates* (Iwan 1998) I provided a new interpretation of that taxon. This genus is distinguished by the following characters: mid part of mentum narrowed apically, lateral wings very wide (Fig. 20) (except *A. podagricus* and *A. occultator* where mid part is widened and the lateral wings are narrow); delicate, barely visible puncturation of pronotum and elytral intervals; lateral border of pronotum expanded and its inner ridge rounded anterior to posterior angles (Fig. 19); the upper edge of elytral base obtuse (i.e. with no sharp edge, sometimes only slightly arched, Figs 4 and 21); widened fore and mid tarsi in male (Figs 12 and 13) (except *A. peringueyi*). The genus includes 25 species, originally described in the following genera: *Platynotus* Fabricius, 1801 – *P. striatus* Quensel (Schönherr 1806); *Trigonopus* Mulsant et Rey, 1853 – *T. platyderus* (type species of the *Atrocrates*), *T. latemarginatus* and *T. marginatus* (Mulsant and Rey 1853); *Melanopterus* Mulsant et Rey – *M. podagricus* Koch (Koch 1956); *Atrocrates* Koch – *A. bisinuatus*, *A. montiscedri* and *A. peringueyi* (Koch 1956), and 17 ones described by Iwan (1998).

Further two new species of this genus have recently been discovered among the specimens sent by Dr Chuck L. Bellamy (Transvaal Museum of Natural History, Pretoria, Republic of South Africa).

METHODS AND ABBREVIATIONS

Means and ratios are based on all specimens listed under "Types" (4 males and 4 females of the *A. bellamyi*; measures of the genitalia – 1 or 2 specimens). Measurements were made as follows: width of lateral pronotal border – in the middle of lateral pronotal margin; length of body – from anterior margin of labrum to elytral apex; width of body – maximum elytral width.

The following abbreviations have been used in the descriptions:

- pl/pb – pronotal length/breadth ratio;
- el/eb – elytral length/breadth ratio;
- el/pl – length ratio elytra/pronotum;
- eb/pb – breadth ratio elytra/pronotum;
- lap/lbp – length ratio apical/ basal parts of aedeagal tegmen;
- c1/c2/c3/c4/c4–c3 – length ratios coxites1/coxites2/coxites3/coxites4/coxites4–coxites3;
- bc1/lc1 – coxites1 breadth/length ratio;
- lp/lc1 – length ratio paraproct/coxites1.

Atrocrates bellamyi sp. nov.
(Figs 1–17, 33)

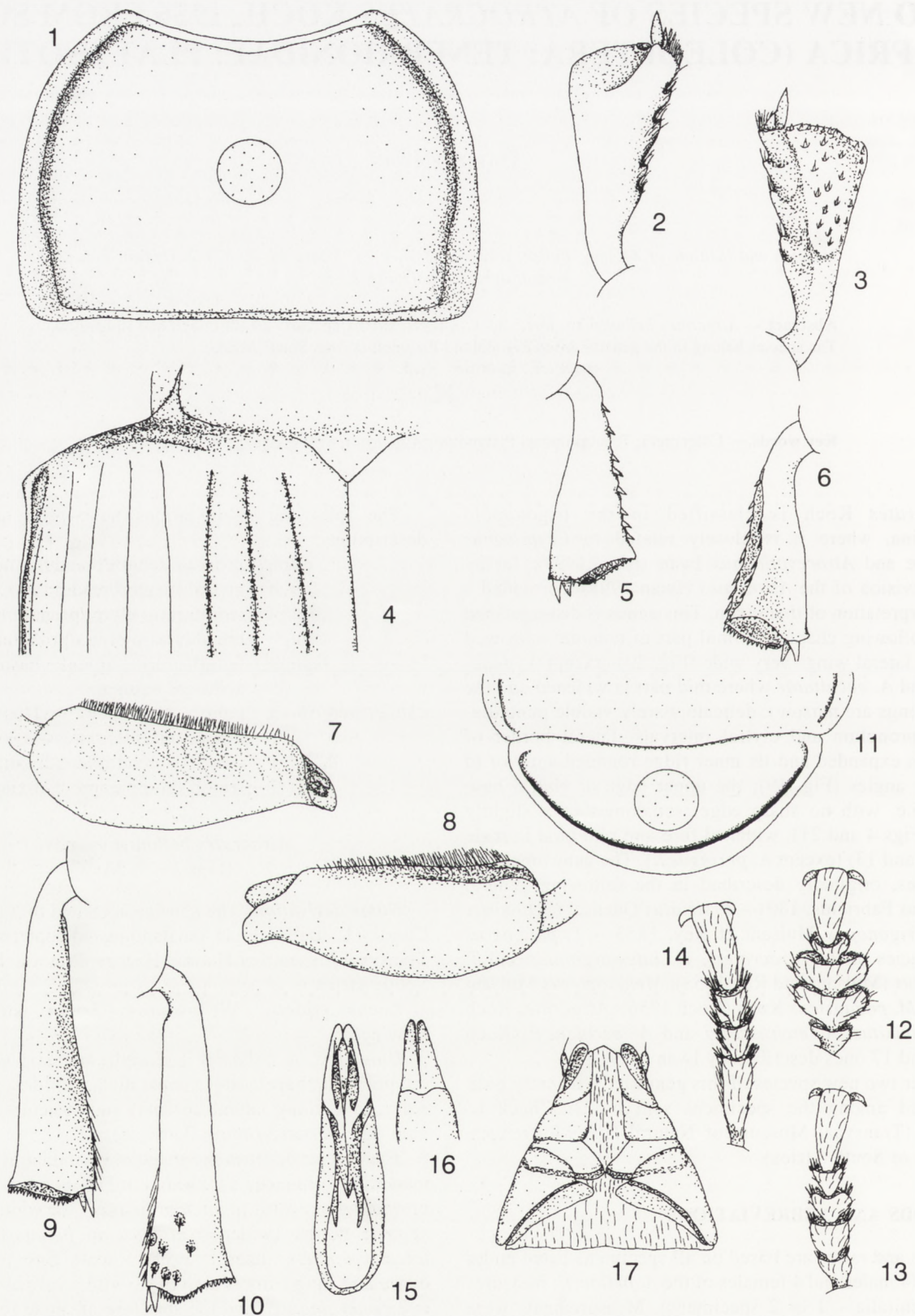
Name derivation. The species is named in honour of Dr. Charles L. Bellamy, an outstanding coleopterist from the Transvaal Museum of Natural History, Pretoria, Republic of South Africa.

Locus typicus. Willowmore (South Africa, Cape Province).

Diagnosis. *A. bellamyi* is close to *latemarginatus* due to the pronotal shape (sides subparallel, with deep, longitudinal groove along lateral borders) and structure of episternum (lateral part strongly flattened).

The species differ in the shape of elytral humeri (distinct, moderately produced backwards in *bellamyi*; small, slightly protruding outwards in *latemarginatus*), the width of the last ventrite border (widened at apex in *bellamyi*; equal in *latemarginatus*), inner margin of male fore femur (with dense and long hairs in *bellamyi*, with a row of short setae in *latemarginatus*), and the structure of male fore and mid tibia (with denticles in *bellamyi*; simple in *latemarginatus*).

Description. Body dark brown to black; length 8.8–10.6 mm, pl/pb = 0.55–0.62, el/eb = 1.21–1.34, el/pl = 2.09–2.12, eb/pb = 0.86–0.93. Upperside slightly shiny, with a greasy



Figures 1–17. *Atrocates bellamyi*: (1) pronotum; (2) dorsal and (3) ventral view of male fore tibia; (4) anterior part of elytron; (5) ventral and (6) dorsal view of male mid tibia; (7) dorsal and (8) ventral view of male fore femur; (9) dorsal and (10) ventral view of male hind tibia; (11) last abdominal ventrite; dorsal view of male fore (12), mid (13) and hind (14) tarsi; (15) ventral view of aedeagus; (16) dorsal view of apical part of aedeagus; (17) ovipositor.

sheen; puncturation delicate, often invisible, elytra at apex densely and distinctly punctate. Underside shiny, puncturation sparse and weak, prosternal sides and episternum with delicate, longitudinal wrinkles. Body oval, convex, elytra slightly tucked in posteriorly (small part of interval IX visible from underside). Head widest at eyes level. Clypeus weakly emarginated. Fronto-clypeal suture poorly marked, practically invisible. Eyes narrowed laterally, between gena and tempus 2–3 facets visible. Antennal segment 3 about 1.9–2.2 longer than segment 2. Mid part of mentum narrowed apically, median keel reaching anterior margin, lateral wings wide. Pronotum as in Fig. 1, with sides subparallel at basal 1/3 or slightly rounded, narrowed anteriorly; pronotal disc convex, with deep, longitudinal groove along lateral borders; base straight, narrowly bordered; anterior and posterior angles rounded; lateral border wide, 1.2 wider than antennal segment 3. Scutellum moderately wide, distance between humeral angle and scutellum ca. 2.6–2.8 scutellum width. Episternum strongly flattened, with deep gutter along the margin. Anterior part of elytron as in Fig. 4. Upper edge of elytral base weakly convex, slightly arched in the middle; lower edge weak; humeral angle distinct, moderately produced backwards. Elytral intervals flat; striae strongly incised, punctato-sulcate; connection of elytral striae in apical part as follows: 1–9, 2–7, 3–6, 4–5, 8–free. Elytral epipleura with sparse, transverse wrinkles; slightly bent at humeral angle; upper edge well visible apically, epipleura strongly convex, but located dorsally. Prosternal process protruding towards mesosternum, with a border interrupted at apex. Body apterous, metasternum shortened. Last abdominal ventrite bordered (Fig. 11). Male fore and mid tarsi widened (Figs 12 and 13), hind tarsi narrow (Fig. 14), glabrous gutters on the underside of tarsi according to the formula: fore – absent, mid – 4th tarsomere, hind – 1st–3rd tarsomeres; all female tarsi narrow, with glabrous, shiny gutters on underside of all tarsomeres. Male legs: fore tibia evenly widened towards apex, with 4 denticles on inner margin (Figs 2 and 3); mid tibia with small, apical denticle on inner side, outer margin with 2 longitudinal ridges (Figs 5 and 6); hind tibia straight (Figs 9 and 10). Tibiae in both sexes covered with thorns on underside. Inner margin of male fore femur with long and dense hairs (Figs 7 and 8). Aedeagus (Figs 15 and 16): $lp/lbp = 2.6–2.8$, length ratio male body/aedeagus ca. 4.8. Ovipositor (Fig. 17): $lp/lc1 = 2.6$, $bc1/lc1 = 2.3$, $c1/c2/c3/c4/c4-c3 = 1.0/1.3/1.2/1.7/0.3$, length ratio female body/ovipositor ca. 6.3

Types. Holotype: (male), TMNH: “Willowmore, Capland, Dr. Brauns; *Atrocrates latemarginatus* Muls. et R., C. Koch det.”. Paratypes: Willowmore, Capland, Dr. Brauns, (TMNH) 4 m, 3 f; Willowmore, C. P., 30-X-1948, Koch & van Son, (TMNH) 1 m, 2 f; Iowerwaterkloeb, Willowmore Distr., Mus. staff, Oct. 1938, (TMNH) 1 m, 1 f.

Distribution. South Africa (Cape Province: Willowmore) (Fig. 33).

Atrocrates robertsonensis sp. nov.
(Figs 18–33)

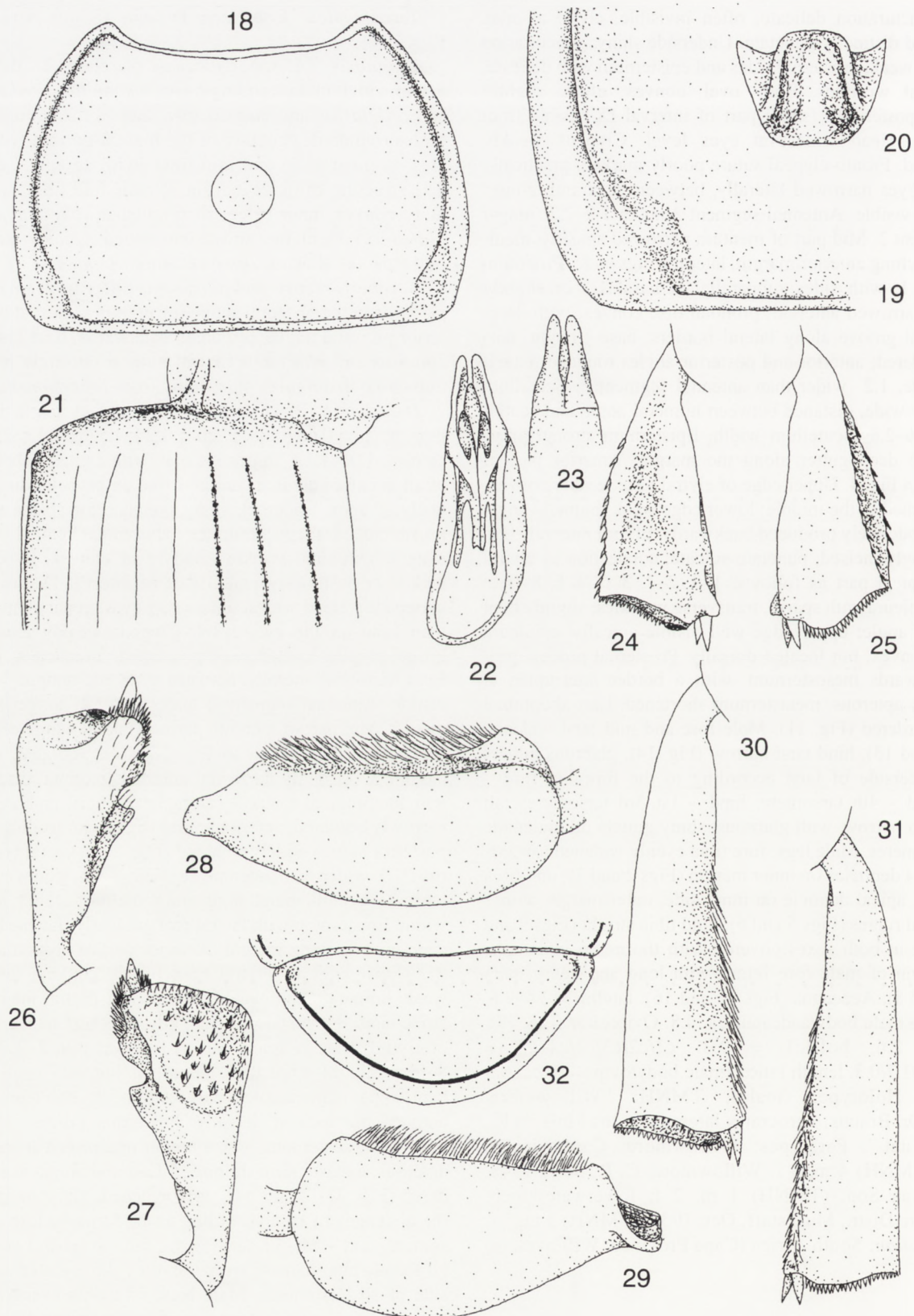
Name derivation. From *terra typica*.

Terra typica. Robertson District (South Africa, Cape Province).

Diagnosis. *A. robertsonensis* is related to the species group which includes *platyderus*, *bisinuatus*, *bredasdorpensis*, *ordinarius* and *montiscedri*, due to the pronotal shape (sides rounded), structure of the male fore tibia (with denticles on inner side) and mid tibia (with an apical denticle). The structure of outer margin of male mid tibia (with arcuately convex inner ridge) distinguishes *robertsonensis* and *platyderus* from the above-mentioned species and places both species close to *sinuosus* and *pliskoae*.

A. robertsonensis and *platyderus* differ from *sinuosus* and *pliskoae* in the pronotal shape (pronotum widest at base, posterior pronotal angles produced backwards, base bisinuate in *sinuosus* and *pliskoae*). Elytral humeri (strongly protruding outwards) distinguish *platyderus* from *robertsonensis*.

Description. Body dark brown to black; length 12.2–12.3 mm, $pl/pb = 0.65–0.68$, $el/eb = 1.24–1.37$, $el/pl = 2.05–2.13$, $eb/pb = 1.02–1.12$. Upperside mat, with a greasy sheen; puncturation extremely delicate, invisible on pronotal disc, distinct at elytral apex. Underside shiny, puncturation sparse and weak, prosternal sides, episternum and abdominal ventrites with delicate, longitudinal wrinkles. Body oval, convex, elytra slightly tucked in posteriorly (small part of interval IX visible from underside). Head widest anterior to eyes, genal canthus wider than head on the eyes level. Clypeus weakly emarginated. Fronto-clypeal suture poorly marked, practically invisible. Eyes narrowed laterally, between gena and tempus 1–2 facets visible. Antennal segment 3 about 2.0–2.2 longer than segment 2. Mid part of mentum narrow, lateral wings well visible (Fig. 20). Pronotum as in Fig. 18, sides rounded, widest at basal 1/3, strongly narrowed anteriorly; pronotal disc convex, with longitudinal concavity along lateral borders; base straight, narrowly bordered; anterior angles slightly protruding anteriorly, posterior angles widely rounded (Fig. 19); lateral border narrow, 0.9 wider than antennal segment 3. Scutellum small, distance between humeral angle and scutellum ca. 3.8 scutellum width. Episternum with lateral part gradually flattened, without deep groove along margin. Anterior part of elytron as in Fig. 21. Upper edge of elytral base poorly convex; lower edge weak; humeral angle weakly developed. Elytral intervals flat; striae incised, punctato-sulcate; 8th row shortened; connection of elytral striae in apical part as follows: 1–9, 2–7, 3–6, 4–5, 8–free. Elytral epipleura smooth; at humeral angle slightly bent; upper edge in apical part well visible, epipleura strongly convex, but located dorsally. Prosternal process protruding towards mesosternum, with a border interrupted at apex. Body apterous, metasternum shortened. Last abdominal ventrite bordered (Fig. 32). Male fore tarsi widened, glabrous gutters on the underside of tarsi according to the formula: fore – 4th tarsomere, mid – 1st–4th tarsomeres, hind – 1st–3rd tarsomeres; all female tarsi narrow, with glabrous, shiny gutters on underside of all tarsomeres. Male legs, fore tibia evenly widened towards apex, with 2 denticles on inner margin (Figs 26 and 27); mid tibia with arcuately convex inner ridge (one of two double ridges located on outer margin), and with apical denticle on inner side (Figs 24 and 25); hind tibia slightly bent



Figures 18–32. *Atrocrates robertsonensis*: (18) pronotum; (19) pronotal posterior angle; (20) mentum; (21) anterior part of elytron; (22) ventral view of aedeagus; (23) dorsal view of apical part of aedeagus; (24) dorsal and (25) ventral view of male mid tibia; (26) dorsal and (27) ventral view of male fore tibia; (28) dorsal and (29) ventral view of male fore femur; (30) dorsal and (31) ventral view of male hind tibia; (32) last abdominal ventrite.

inside (Figs 30 and 31). Inner margin of male fore femur with long and dense hairs (Figs 28 and 29). Legs of both sexes, tibiae covered with thorns on underside; outer margin of hind tibia smooth, without longitudinal ridges. Aedeagus (Figs 22 and 23) $lp/lbp = 2.2$, length ratio male body/aedeagus ca. 6.1. Ovipositor: $lp/lc1 = 2.9$, $bc1/lc1 = 1.7$, $c1/c2/c3/c4/c4-c3 = 1.0/1.3/1.0/1.3/0.2$, length ratio female body/ovipositor ca. 4.9.

Types. Holotype: (male), TMNH: "Dassiesberg, Robertson Dist., Mus. staff, Jan. 1936; *Atrocates robertsonensis* Koch [in litter.]". Paratype: Dassiesberg, Robertson Dist., Mus. staff, Jan. 1936, (TMNH) 1 f.

Distribution. South Africa (Cape Province: Robertson) (Fig. 33).

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Figure 33. Distribution of *Atrocates bellamyi* (solid circle) and *A. robertsonensis* (open circle).

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