

Four new species of Neotropical Cyclocephalini (Coleoptera: Scarabaeidae) (*)

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Abstract

Four new species of Cyclocephalini are described. These are *Aspidolea lindae* from Colombia, *Mimeoma englemanni* from Panamá, *Stenocrates rabbanii* from Brazil, and *Stenocrates haacki*, also from Brazil.

During collecting trips to Leticia, Colombia, in 1974, and Panamá in 1976, I collected examples of new species in the genera *Aspidolea* and *Mimeoma* respectively. The new *Stenocrates* were collected near Manaus, Brazil, by an entomology grauate student at the Instituto Nacional de Pesquisas da Amazônia in Manaus. These species are here described and figured in such a manner so as to enable easy identification without the use of keys. The collection abbreviations used are those of Arnett and Samuelson (1969), and the description of puncture size and depth follows my earlier usage (Ratcliffe, 1975).

Aspidolea lindae, new species (Fig. 1-2)

TYPE MATERIAL — Holotype male, labeled "Leticia, Amazonas, Colombia, II-23 to III-1-1974, B.C. Ratcliffe". Allotype female with same data as holotype. Single male paratype labeled "Leticia, Amazonas, 700", Colombia, Feb. 25, 1974, H. & A. Howden". Types deposited at the University of Nebraska State Museum (UNSM); paratype deposited in the Henry and Anne Howden Collection at the Canadian National Collection of Insects (HAHC at CNCI).

HOLOTYPE — Male. Length 13.4 mm; greatest width 7.3 mm. Color dark reddish brown, weakly shining; head black; legs, venter, base of pronotum, margins of scutellum, elytral suture, and pygidium piceous to black. Pronotum and apical umbone of elytra with faint, fuscous clouding. **Head:** Front very mi-

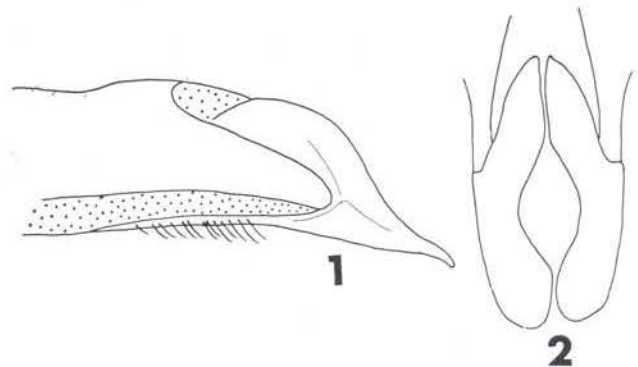


Fig. 1-2 — *Aspidolea lindae*. Lateral and caudal views of male genitalia.

nutely scabrous, densely, non-setigerously punctate; punctures small and moderate mixed, shallow. Interocular width about 2.0 transverse eye diameters as seen from above. Frontoclypeal suture distinct, weakly arcuate, margins slightly raised. Clypeus with margins beaded, a little wider than long, sides parallel, apical angles broadly rounded, apex subtruncate, reflexed; surface densely rugo-punctate. Antennae 10-segmented, club a little longer than 2/3 length of basal 7 segments. **Pronotum:** Length-width ratio 3:3.5; sides rounded, widest just behind middle. Anterior angle acute, basal angle broadly rounded. Anterior and lateral margins beaded, posterior margin lacking a bead. Anterior margin slightly produced at middle. Surface very minutely wrinkled as on front, moderately punctate, punctures becoming more dense laterally and sparser near anterior margin on either side of midline; punctures moderate in size, shallow, ocellate, non-setigerous. Scutellum triangular, surface similar to pronotum except a few punctures confluent. **Elytra:** Widest near middle; lateral margins indented slightly at humerus and a little more so behind humerus. Surface very minutely

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scabrous. Disc non-setigerously punctate; punctures moderate in density, shallow, ocellate, random except for one row at suture, one vague double row in middle of disc, and one vague double row near lateral margin of disc; discal rows arcuate, becoming obsolete in apical third. Sides similar to disc; a very feeble double row of punctures behind humeral umbone, and a feeble double row of punctures between umbone and lateral margin. *Pygidium*: Convex in lateral view and protuberant at middle. Disc finely scabrous, moderately punctate; punctures small, shallow, non-setigerous. Base rugo-punctate to rugose. Apical margin strongly beaded; lateral emargination either side of middle extremely shallow, rugo-punctate. *Genitalia*: Figs. 1-2. *Legs*: Foretibiae tridentate in apical half. Foretibiae with tarsomeres 1-4 each slightly shorter than one preceding it; segment 5 enlarged, about 3 times as long segment 4; inner claw greatly enlarged, narrowly and unevenly cleft at apex.

ALLOTYPE — Female. Length 14.2 mm; greatest width 7.0 mm. As holotype except in the following respects: *Head*: Front with punctures very dense, often confluent apically. Color of clypeus piceous, not black. Antennal club slightly shorter. *Elytra*: Vague, double rows of punctures on disc becoming obsolete in apical fourth. *Pygidium*: Convex in lateral view but not protuberant at middle. Punctures larger. Lateral emargination absent. *Legs*: Front tarsus with segment 5 not greatly enlarged, about 2.5 times as long as segment 4. Inner claw not enlarged or split at apex.

VARIATION — Single male paratype is 13.0 mm long and 7.1 mm at greatest width. Variation is slight: scutellum lacks confluent punctures, margins of elytra lack slight indentation at humerus (but retain post-humeral indentation), and pygidium a little more densely punctate and without lateral emarginations.

DISCUSSION — The following characters in combination are diagnostic for this species: the rugo-punctate clypeus, darkened sutural edge, venter not entirely black, reddish-brown pronotum and elytra which lack markings, pronotal margin not sharply edged, and the form of the male genitalia. All three specimens were taken at black light.

ETYMOLOGY — This species is named in honor of my wife, Linda.

Mimeoma englemani, new species
(Fig. 3-6)

TYPE MATERIAL — Holotype male, labeled "Panamá, dist. Chepo, Altos de Majé, 17 May 75, at light, Stockwell-Engleman". Allotype female, labeled "Panamá: Panamá Prov., Altos (Isla) de Majé, 9°08'N, 78°49'W, V-14-16-1976, at BL, B. C. Ratcliffe". Single male paratype labeled "Panamá: Canal Zone, Achote Road, 9°12'N, 79°59'W, V-18-19-1976, B. C. Ratcliffe". Two female paratypes labeled "Panamá: Canal Zone, Coco Solo Hospital, V-21-1976, light trap, B. C. Ratcliffe", and "Darién Prov., Santa Fe, Pan., IV-V-67, D. M. DeLong & C. A. Triplehorn collectors, malaise trap." Types deposited at the University of Nebraska State Museum (UNSM); paratypes deposited in the Brett C. Ratcliffe Collection (BCRC) and in the Henry and Anne Howden Collection at the Canadian National Collection of Insects (HAHC at CNCI).

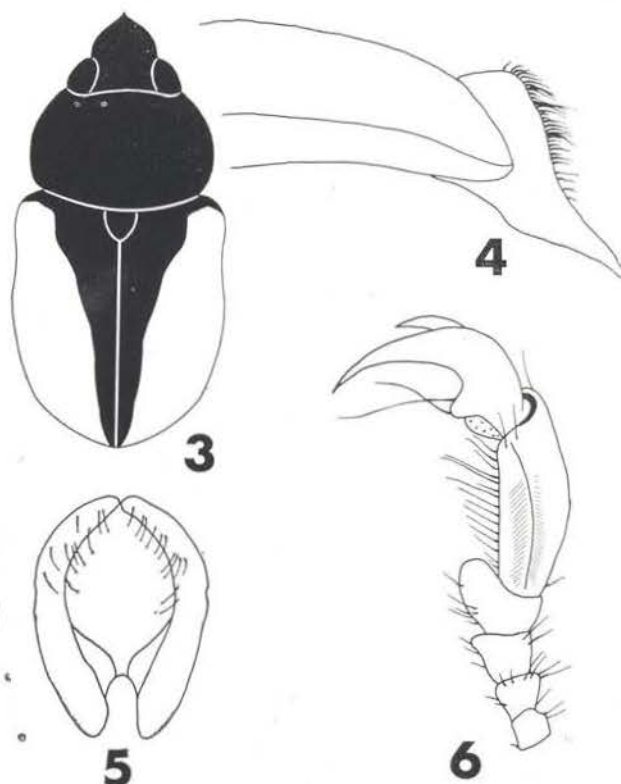


Fig. 3-6 — *Mimeoma englemani*. Fig. 3 — dorsal view; Fig. 4-5 — lateral and caudal views of male genitalia; Fig. 6 — right foretarsus of male.

HOLOTYPE — Male. Length 14.2 mm; greatest width 6.5 mm. Color (Fig. 3) black except for anterior angles and lateral margin of pronotum, and discal and lateral areas of elytra which are testaceous. Pronotum strongly shining, head and elytra weakly shining. *Head*: Surface very minutely scabrous. Vertex sparsely punctate; punctures small, shallow, non-setigerous. Front densely punctate; punctures small and moderately large mixed (larger either side of middle), shallow, larger punctures either side of middle setigerous; setae short, fulvous. Interocular width slightly more than 2 transverse eye diameters as seen from above. Frontoclypeal suture very slender, distinct, arcuate. Clypeus a little wider than long, subtriangular, sides rounded and slightly arcuate just before apex, margins beaded; apex acutely pointed. Surface densely punctate; punctures small and moderately large mixed, shallow, setigerous, becoming obsolete near apex; setae short, fulvous. Antennae 10-segmented, club subequal to segments 2-7. *Pronotum*: Length-width ratio 2:3. Sides rounded, widest at middle; anterior angle acute, basal angle broadly rounded. All margins beaded; anterior marginal bead slightly produced at middle. Surface very minutely scabrous, punctate, and with a feeble, longitudinal, median impression. Disc with punctures moderate in density, small and moderately large mixed, shallow, larger punctures setigerous; setae sparse, very short, fulvous. Base and apex similar to disc. Sides more densely punctate, apical angles becoming very densely punctate; punctures in apical angle large, shallow, confluent, setigerous; setae moderately dense, very short, fulvous. Apical angle and slender band along lateral margin testaceous; also a small, round, faint, testaceous spot near anterior margin behind eye. Scutellum triangular, similar to disc of pronotum in sculpturing. *Elytra*: Widest at base. Surface densely and very minutely scabrous, nearly subgranular. Disc setigerously punctate; punctures moderately dense, very shallow, ocellate, random except for 1 row at suture, 3 adjacent and poorly defined rows on center of disc, and 2 adjacent and impressed rows on lateral edge of disc; latter 2 rows slightly better defined than those on middle of disc and strongly

arcuate near base; rows becoming obsolete in apical 1/4 of elytra; setae very short, sparse, fulvous. Sides similar to disc; 4 adjacent, slightly impressed rows of punctures behind humerus. *Pygidium*: Convex in lateral view. Disc densely and finely scabrous, setigerously punctate; punctures moderately dense, moderate in depth and size; setae very long, slender, moderately dense, fulvous. Apical margins beaded, lateral emargination absent. *Genitalia*: Figs. 4-5. Parameres with moderately long, dense, fulvous setae on basal half. *Legs*: Foretibiae bidentate in apical fourth. Foretarsus (Fig. 6) with tarsomeres 1-4 subequal in length; segment 3 expanded beneath into a small, longitudinal, plate-like area; segment 4 greatly expanded beneath into a large, longitudinal, plate-like area; segment 5 enlarged, about 3 times as long as preceding segment, without a ventral, plate-like area; inner claw greatly enlarged, large tooth at base, apex entire.

ALLOTYPE — Female. Length 14.4 mm; greatest width 7.0 mm. As holotype except in the following respects: Color of clypeus and pronotum black with faint piceous clouding; elytral margin just behind middle with an elongate, black patch; lateral emargination of pygidium with faint, testaceous clouding. *Head*: Surface aciculate. Front with punctures slightly less sparse medially; punctures apparently non-setigerous (setae may be worn off). Clypeus punctate to rugo-punctate; punctures dense, moderately large, shallow, often elongate, non-setigerous, becoming obsolete near apical third. *Pronotum*: Longitudinal median impression absent. Punctures apparently non-setigerous. Apical angles not more densely punctate. Testaceous coloration lacking in apical angle, on lateral margin, and near anterior margin behind eye. *Elytra*: Widest just behind middle. Punctures apparently non-setigerous, although a few small setae near suture and apex. Disc with median row of punctures better defined; random punctures lacking between rows. Sides with lateral 2 rows of punctures poorly defined. *Pygidium*: Not as convex as in holotype. Punctures non-setigerous, small and moderate mixed. Lateral emargination very shallow. *Legs*: Foretibiae tridentate in apical half, although apical tooth on right foretibia broken off. Foretarsus with

segment 1 about twice as long as segment 2; segments 2-4 subequal; segments 3-4 not expanded beneath; segment 5 not greatly enlarged, about 2.5 times longer than preceding segment; inner claw not enlarged.

VARIATION — Males (1 paratype): Length 14.8 mm; greatest width 6.6 mm. Variation is slight: clypeus with marginal bead effaced apically and with only a few setigerous punctures (setae probably worn off); pronotum without testaceous spot near anterior margin behind eye.

Females (2 paratypes): Length 12.1-14.0 mm; greatest width 6.0-7.0 mm. Essentially agreeing with allotype except in the following respects: clypeus of 1 female ferruginous medially. Pronotum with testaceous clouding in apical angles of both. Pygidium with punctures very small in both.

DISCUSSION — *Mimeoma englemani* is the fourth species to be assigned to the genus *Mimeoma* which heretofore had not been recorded from Panamá (Endrödi, 1966). *M. englemani* is easily separated from *M. acuta* (Arrow) by the shape of the clypeus and lack of elytral markings in *M. acuta*; and from *M. signatoides* (Höhne) and *M. maculata* (Burmeister) by the shape of the male genitalia, characteristic markings in *M. englemani*, and by the presence of an acute tooth on the 5th foretarsal segment in *M. signatoides* which is absent in *M. englemani*. The male genitalia of *M. englemani* and *M. acuta* are similar, but the other characters listed will serve to separate these two species.

ETYMOLOGY — This species is named in honor of a very good friend and colleague, Dodge Engleman, M. D., who has graciously provided me with invaluable assistance and shared in superb collecting during my visits to Panamá in 1975 and 1976.

***Stenocrates rabbanii*, new species**
(Fig. 7-8)

TYPE MATERIAL — Holotype male, labeled "Brasil, Amazonas, Lago Januacá, 45 km SW Manaus, 1-21-1977, B. Mascarenhas". Allotype female and 6 paratypes with same data as holotype. Types deposited at the Instituto Nacional de Pesquisas da Amazônia (INPA). Paratypes deposited in the Museu Paraense

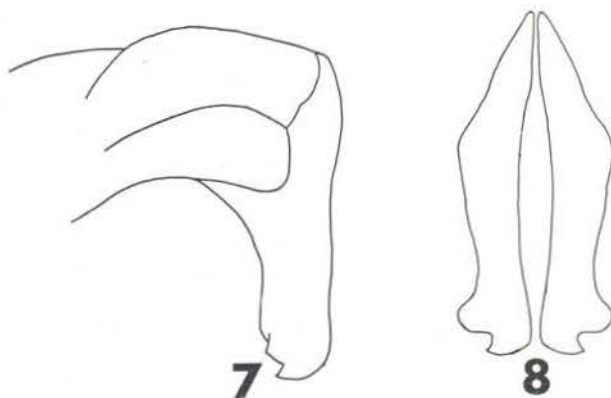


Fig. 7-8 — *Stenocrates rabbanii*. Lateral and caudal views of male genitalia.

Emílio Goeldi (MPEG), the Museu de Zoologia da Universidade de São Paulo (MZSP), and in the Brett C. Ratcliffe Collection (BCRC).

HOLOTYPE — Male. Length 13.5 mm; greatest width 7.0 mm. Color black; legs and tarsi dark castaneous. **Head:** Front rugose, non-setigerous. Interocular width 2.75 transverse eye diameters as seen from above. Frontoclypeal ridge distinct, feebly emarginate medially. Clypeus trapezoidal, narrowing apically, sides weakly arcuate; a sharp, transverse carina just before apex, carina extends laterally around to sides; surface transversely rugose. Antennae 10-segmented, club about as long as segments 2-7. **Pronotum:** Length-width ratio 2:3. Anterior margin slightly produced at middle, beaded; anterior angles salient, acute, forward of anterior margin; sides rounded, beaded; posterior angles obtusely rounded; base without a marginal bead. Surface extremely finely subrugose, irregularly and moderately punctate, becoming very sparsely punctate at anterior margin; punctures small to moderate in size, shallow, non-setigerous, weakly ocellate, some weakly umbilicate. Scutellum triangular, several minute punctures in basal angles, a single large puncture just before apex. **Elytra:** Widest near middle. Surface very finely rugose. Discal area with 8 rows of punctures; punctures moderately large, shallow, non-setigerous, ocellate (lighter colored rim of puncture U-shaped, open posteriorly). Row 1 (adjacent to suture) regularly punctate; row 2 irregular (punctures not in a single line); rows 3-4 regular, closely adjacent; row 5 absent in basal

half, regular in apical half; rows 6-7 closely adjacent as rows 3-4; row 8 irregular. Sides similar to disc except punctures becoming smaller laterally, smaller punctures simply ocellate (lacking a U-shaped rim); 2 regular rows of punctures behind humerus medially, followed laterally by an area of irregular punctures, 2 additional rows of regular punctures behind humerus, and an area of irregular punctures next to lateral margin. *Pygidium*: Strongly convex in lateral view. Surface very finely rugose, densely punctate; punctures large, shallow, ocellate, non-setigerous, some confluent apically. Marginal bead present. *Genitalia*: Figs. 7-8. *Legs*: Foretibiae tridentate in apical half. Foretarsi with segments 1 and 5 subequal; segments 2-4 subequal, about half the length of segments 1 or 5. Meso- and metatarsi with segments 1-4 slightly shorter than one preceding it.

ALLOTYPE — Female. Length 12.5 mm; greatest width 6.5 mm. As holotype except in the following respects: *Head*: Interocular width 3.0 transverse eye diameters as seen from above. *Pronotum*: Scutellum virtually impunctate. *Elytra*: Discal punctures slightly larger; row 5 effaced, only 6 punctures in apical third; row 8 subregular. Sides with lateral punctures becoming very small; row pattern same as holotype but less pronounced. *Pygidium*: Weakly convex in lateral view.

VARIATION — Males (3 paratypes): Length 13.0-13.5 mm. *Head*: Interocular width 2.75-3.0 transverse eye diameters as seen from above. *Pronotum*: Scutellum nearly impunctate in 2 paratypes. *Elytra*: Discal area with row 2 effaced basally in 2 specimens and apically in 1 specimen. Sides with minor variation in puncture size.

Females (3 paratypes): Length 12.5-13.5 mm; greatest width 6.5-7.0 mm. *Head*: Interocular width 2.75-3.0 transverse eye diameters as seen from above. *Elytra*: Discal area with row 5 effaced in apical third (not apical half) in 1 specimen. Sides with row pattern confused in 2 specimens.

DISCUSSION — The male parameres of *S. rabbanii* are similar to those of *S. rufipennis* (Fabr.) but differ in the following respects: in caudal view the lateral bulge of the paramere is above the middle in *S. rabbanii* and just below

the middle in *S. rufipennis*. In lateral view the paramere is proportionately much more elongate and the apex more slender in *S. rabbanii*; *S. rabbanii* also possesses a prominent, subapical tooth protruding from the concave margin of the paramere whereas *S. rufipennis* does not.

These specimens were taken at about 100 m from shore at fluorescent white light located on the roof of a boat moored in Lake Januacá. A return trip to the type locality 11 days later failed to yield further specimens.

ETYMOLOGY — This species is named in memory of the late Dr. Mohammad G. Rabbani who was section head of malaria research at the Instituto Nacional de Pesquisas da Amazônia in Manaus, Amazonas, Brazil.

***Stenocrates haacki*, new species**
(Fig. 9-10)

TYPE MATERIAL — Holotype male, labeled "Brasil, Amazonas, Lago Januacá, 45 km SW Manaus, 1-21-1977, B. Mascarenhas". One male paratype with same data as holotype. Type deposited at the Instituto Nacional de Pesquisas da Amazônia (INPA). Paratype deposited in the Museu de Zoologia da Universidade de São Paulo (MZSP).

HOLOTYPE — Male. Length 21.0 mm; greatest width 11.0 mm. Color black; legs and tarsi dark castaneous. *Head*: Front moderately punctate either side of middle; punctures moderate to large, shallow, non-setigerous, some confluent. Interocular width 3.0 transverse eye diameters as seen from above. Frontoclypeal suture a shallow, weakly impressed furrow. Clypeus trapezoidal, narrowing apically; a sharp, transverse carina just before apex, carina extending weakly around to sides; surface transversely rugose. Antennae 10-segmented, club about as long as segments 2-7. *Pronotum*: Length-width ratio 3:5. Anterior margin slightly produced at middle, beaded; anterior angles salient, acute, forward of anterior margin; sides rounded, beaded; posterior angles obtusely rounded; base without a marginal bead. Surface very finely rugose. Disc sparsely punctate; punctures small to moderate, shallow, non-setigerous. Sides a little more densely punctate (especially in posterior third); punctures small medially and small to large in apical and basal thirds,

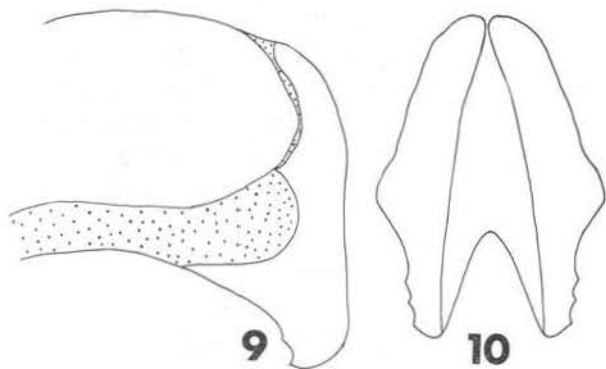


Fig. 9-10 — *Stenocrates haacki*. Lateral and caudal views of male genitalia.

shallow, non-setigerous; moderate and large punctures ocellate-umbilicate. Scutellum triangular with a few, shallow, minute punctures. *Elytra*: Widest at middle. Surface very finely rugose. Discal area with 8 rows of punctures; punctures moderate to large, shallow, non-setigerous, ocellate (rim of puncture U-shaped, open posteriorly). Row 1 (adjacent to suture) regularly punctate; row 2 irregular (punctures not in a single line); rows 3-4 regular; row 5 absent in basal half and at apex, otherwise regular; rows 6-7 regular; row 8 irregular, effaced at base by humerus. Sides similar to disc except punctures becoming much smaller laterally; 2 regular rows of punctures behind humerus (a short row of 8 punctures on humerus between these rows), followed laterally by an area of irregular punctures, 2 additional (but weak) rows of regular punctures, and a small area of irregular, very feeble punctures next to lateral margin. *Pygidium*: Convex in lateral view. Surface extremely finely rugose, moderately densely punctate; punctures large, shallow, non-setigerous, umbilicate, weakly ocellate. Marginal bead present. *Genitalia*: Figs. 9-10. *Legs*: Foretibiae tridentate in apical half. Foretarsi with segments 1 and 5 subequal; segments 2-4 subequal, about half the length of segments 1 or 5. Meso- and metatarsi with segments 1-4 slightly shorter than one preceding it.

VARIATION — The single male paratype does not differ significantly from the holotype. The genitalia were, however, considerably damaged during preparation.

DISCUSSION — The male genitalia will serve to separate this species from all others in the

genus. The parameres most closely resemble those of *S. rugulosus* Endrödi, but differ in that the lateral bulge (as seen in caudal view) is near the middle of the paramere in *S. haacki* and well above the middle in *S. rugulosus*; in addition, the apex of the paramere of *S. haacki* has 3 lateral tooth-like projections whereas there are only 2 in *S. rugulosus*. Finally, the apex of the paramere of *S. haacki* (as seen in lateral view) is much broader than that of *S. rugulosus*.

Like the preceding species, these specimens were taken at about 100 m from shore at fluorescent white light located on the roof of a boat moored in Lake Januacá. A return trip to the type locality 11 days later failed to yield further specimens.

ETYMOLOGY — This species is named after Martha J. Haack, Scientific Illustrator at the University of Nebraska State Museum, Lincoln, Nebraska, U. S. A., in recognition of her superb renditions of entomological subjects.

ACKNOWLEDGEMENTS

Grateful acknowledgement is made to the Myron F. Swenk Memorial Fund of the University of Nebraska for providing travel funds to Colombia in 1974 and to the University of Nebraska Research Council for providing travel funds to Panamá in 1975 and 1976. The paratype of *A. lindae* and one of the paratypes of *M. englemani* were loaned by Henry F. Howden, Carleton University, Ottawa, Canada.

Resumo

Quatro novas espécies de Cyclocephalini (Coleoptera: Scarabaeidae) são descritas. Estas são: *Aspidolea lindae*, da Colômbia; *Mimeoma englemani*, do Panamá; *Stenocrates rabbanii*, do Brasil; e *Stenocrates haacki*, também do Brasil.

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