

L1 CONCOCTIO CONCENTA species nov.

By William L. Brown, Jr.  
Department of Entomology  
Cornell University  
Ithaca, New York 14850, USA.

Pilot Register of Zoology  
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L2 Insecta: Hymenoptera: Formicidae

L3  
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L5  
L6  
L7 Holotype worker: TL 2.2, HL 0.44, HW 0.40 (CI 91), ML 0.11, scape L 0.27, WL 0.62  
L8 mm. Generic characters for Concoctio given on Pilot Register of Zoology Card No. 29.  
L9 Details of body form, sculpture and pilosity shown on this card in figures overleaf;  
L10 see also habitus figure on Card No. 29. The apparent bicolorous condition in the fig-  
L11 ures, with trunk darker than head, petiole and gaster, is due to differences in the  
L12 electron-optical properties of these parts as coated with carbon and gold-palladium.

L13 Of characters not well shown in the figures, but reconstructed from high-magnifica-  
L14 tion scanning electron microscope views, the rounded free lobe of the clypeus bears 5  
L15 stumpy teeth shaped like short-toed socks with the toes pointed laterad; median tooth  
L16 with toe pointed to insect's left. Antennal scapes barely fail to reach posterior border  
L17 of head when held straight back in full-face view. Legs with fine, only moderately  
L18 abundant, appressed to decumbent pubescence. Color before coating uniform, light,  
L19 slightly tawny yellow.

L20 Paratype workers (2): TL 2.1-2.2, HL 0.42 (both), HW 0.37-0.38 (CI 88-90), ML 0.10  
L21 (both), scape L 0.29 (both), WL 0.65-0.67 mm. The 2 paratype workers differ from the  
L22 holotype in their slightly smaller heads and longer scapes and trunks; scapes just  
L23 reach posterior border of head in full-face view when held straight back. Also, the  
L24 paratypes have the posterolateral angles of the petiolar node produced downward and  
L25 backward toward the anterior face of the gaster. These cornuae are only suggested in  
L26 the holotype. Otherwise, the specimens are similar to the holotype, but the anterior  
L27 clypeal border could not be clearly seen in the paratypes.

L28 Queen, dealate: TL 2.3, HL 0.43, HW 0.38 (CI 89), ML 0.11, scape L 0.31, WL 0.76  
L29 mm. Basic differences from worker cited on Card No. 29. Like the paratype workers,  
L30 with which it was originally collected, but head with more nearly straight sides; com-  
L31 pound eyes feebly convex, with more or less 50 facets. Ocelli distinct, the triangle  
L32 astride a dark median pigment blotch. Color and pilosity as in worker.

L33 Male and immature forms unknown.

L34 Holotype (Museum of Comparative Zoology, Harvard University, Cambridge, Massachu-  
L35 setts, USA) taken from a soil-and-litter berlesate in forest on the Plateau d'Ipassa,  
L36 Makokou, Gabon, by M. J. A. Barra of the University of Strasbourg during 1966; M. Barra  
L37 has my thanks for the interesting material sent from this locality. The 2 worker and  
L38 one queen paratypes (British Museum, Natural History, London) were taken on Zanzibar  
L39 Island in soil under a clove tree by R. I. (or R. J.) Robb during 1949, and were sent  
L40 for my study by Mr. Barry Bolton, to whom I am grateful for the opportunity. No doubt  
L41 C. concentra will be found to occur at many other localities in tropical Africa.

L42 Concoctio concentra differs sharply from other Amblyoponini, the tribe to which it  
L43 belongs, in the form of the mandibles. The 9-merous antennae are also unique in the  
L44 tribe, although Amblyopone degenerata has only 7 segments in the antennae. The strongly  
L45 constricted worker trunk, sharply marginate anterior pronotal border, and spurless  
L46 middle and hind legs are also distinctive characters, not found in this combination in  
L47 other Amblyoponini. The name refers to the mixture of characters of Amblyopone and  
L48 Typhlomyrmex; the shape of the mandibles and the overall habitus are at first glance  
L49 like those of the neotropical genus Typhlomyrmex. Though Concoctio is clearly an  
L50 amblyoponine, and only convergent to Typhlomyrmecini, it does point to the possibility  
L51 that the latter stock could have risen from an amblyoponine ancestor by a few rather  
L52 simple evolutionary steps. The food of Concoctio is unknown, but it is probably a  
L53 predator of some member of the arthropodan forest-floor microgenton.

Figures 1 - 5 (overleaf), Concoctio concentra species nov., holotype worker, scanning  
electron micrographs by the author.

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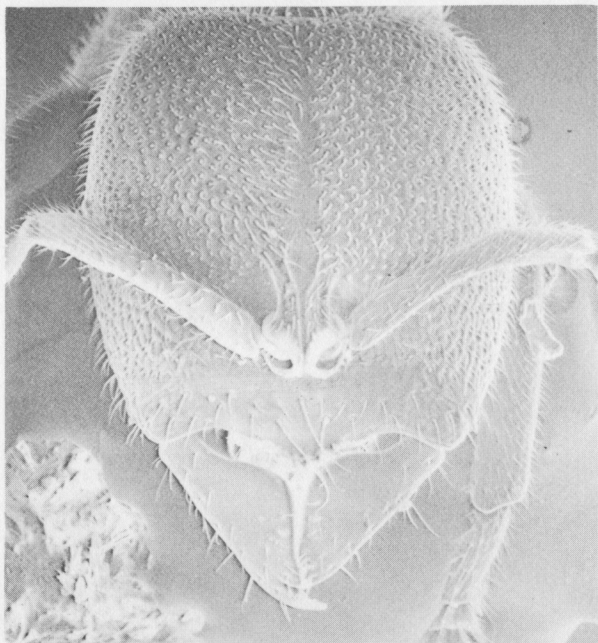


Fig. 1 (top), head in full-face view,  $\times 144$ .



Fig. 2 (bottom), head in side view,  $\times 144$ .

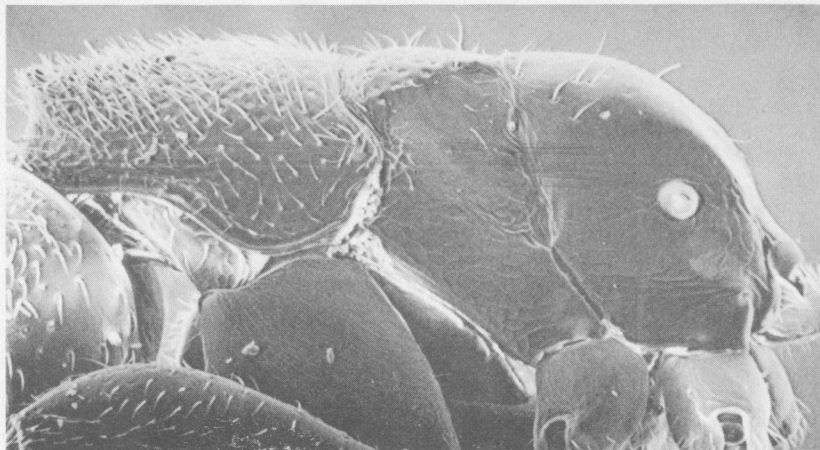


Fig. 3, trunk in side view,  $\times 173$ .

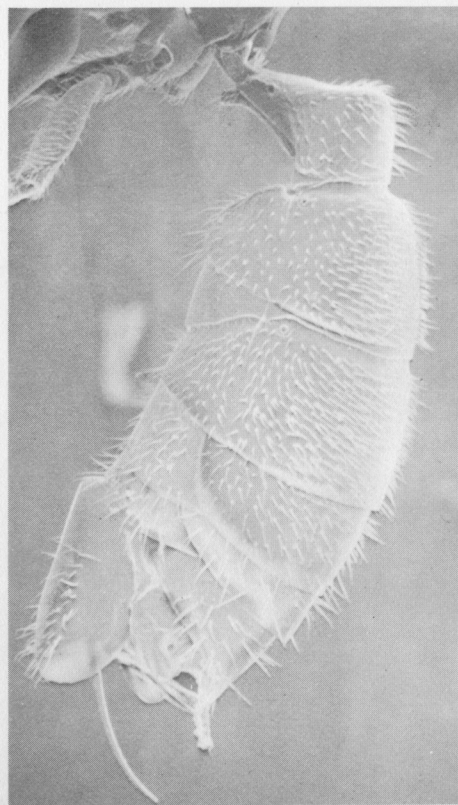


Fig. 4, petiole and gaster, side view,  $\times 106$ .

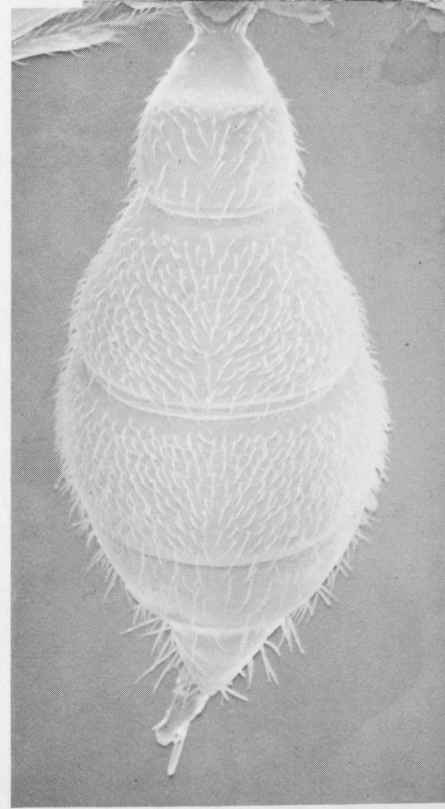


Fig. 5, body from above, composite picture,  $\times 113$ .