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ECOLOGY AND BEHAVIOR OF THE NEOTROPICAL
CRYPTOBIOTIC ANT *BASICEROS MANNI*
(HYMENOPTERA : FORMICIDAE : BASICEROTINI)

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SUMMARY

We report here the first detailed observations of a member of the Neotropical genus *Basicros* (*B. manni*), which possesses the largest and anatomically most primitive workers and queens within the ant tribe Basicerotini.

1. Colonies of *Basicros manni* were found nesting in small rotting logs and a leguminous seed pod on the floor of Costa Rican rain forest. The mature colony composition is a single dealate queen and approximately 50 workers. New queens and males eclosed during late March, in the dry season.

2. *B. manni* workers and queens are cryptically colored to an extreme degree, a condition enhanced by the accumulation of soil and litter particles on the body surface with the aid of a double layer of plumose hairs (fig. 1-3). They are also among the slowest-moving of all ants and "freeze" into immobility for minutes at a time when disturbed.

3. The workers capture a wide diversity of insects, including beetle larvae and (in the laboratory) centipedes, termites, and *Drosophila* adults. The prey are fed directly to the larvae. So far as known the workers forage singly and do not recruit.

4. Emigration is facilitated by a communication behavior apparently preliminary to adult transport: workers that have encountered suitable nest sites tug at the appendages of nestmates, causing them to search on their own. Workers also carry nestmates to the new sites, but less commonly.

5. The repertory size is unusually small for myrmicine ants. A relatively simple temporal division of labor occurs, with young workers functioning more as nurses and older ones as foragers (fig. 4, tables I, II). The ovaries are maximally developed in the youngest workers, evidently in association with the laying of trophic eggs. Conversely, the poison gland reservoir reaches its greatest size in older workers, in association with increased predatory activity.

6. Overall, *B. manni* has a behavioral repertory comparable in complexity but not in detail to that of *Eurhopalothrix heliscata*, the only other basicerotine species studied to date.